

REPORT
ON THE
HEALTH OF THE BOROUGH
OF
BIRMINGHAM,

FOR THE YEAR 1876,

ALSO,

ON THE PROCEEDINGS TAKEN UNDER THE ACT FOR THE

PREVENTION OF ADULTERATION
OF ARTICLES OF FOOD AND DRINK,

BY
ALFRED HILL, M.D.,

Medical Officer of Health,

and

-Analyst to the Borough.

PRINTED BY ORDER OF THE HEALTH COMMITTEE

BIRMINGHAM :

W. G. MOORE & Co., PRINTERS, EDINBURGH WORKS, SCOTLAND PASSAGE, HIGH STREET.



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MEDICAL OFFICER OF HEALTH'S DEPARTMENT,
PUBLIC OFFICE, BIRMINGHAM,

June, 1877.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I have the honor to lay before you my fourth Annual Report, for the year 1876. The population estimated to the middle of the year amounted to 371,839. The total number of

BIRTHS

registered in the Borough during the year is 15,816, comprising 8,028 males and 7,788 females, or as many as 954 more than the number registered during the year 1875. The figures for each quarter of the years 1873, 1874, 1875 and 1876 are as follows :—

	1873.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL.
Total	...	3,741	3,564	3,378	3,814	14,497
Males	...	1,892	1,783	1,715	1,950	7,340
Females	...	1,849	1,781	1,663	1,864	7,157
1874.						
Total	...	3,814	3,871	3,493	3,710	14,888
Males	...	1,953	1,961	1,753	1,853	7,520
Females	...	1,861	1,910	1,740	1,857	7,368
1875.						
Total	...	3,787	3,737	3,581	3,757	14,862
Males	...	1,929	1,884	1,815	1,904	7,532
Females	...	1,857	1,853	1,766	1,853	7,329
Sexless	...	1	—	—	—	1
1876.						
Total	...	4,140	3,924	3,803	3,949	15,816
Males	...	2,045	1,996	1,959	2,028	8,028
Females	...	2,095	1,928	1,844	1,921	7,788

The Birth-rate for 1876 is 42·53 per 1,000 of the population, and is higher than in any year I have record of. It is 4 per 1,000 higher than the average of the last 10 years, as seen by the following statement :—

BIRTH-RATE PER 1,000 OF THE POPULATION.

1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	Average of 10 years
38·48	38·01	36·31	35·53	35·00	39·00	40·50	40·78	41·25	40·57	38·54

It is also higher than that of any of the large English towns, as seen from the following figures :—

London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	Average of large towns.
36·5	33·7	42·5	39·3	39·8	41·8	41·6	39·1

The statement is very often made that the death-rate of a community is high because the birth-rate is high. This has been refuted by several writers, notably by Mr. N. A. Humphreys, of the Registrar General's Office, and it certainly is not supported by a comparison of the respective birth and death-rates in the Borough during the last four years ; during that period the highest

birth-rate has coincided with the lowest death-rate, and the lowest birth-rate with nearly the highest death-rate, so that it is clear a high birth-rate taken by itself is not the general cause of a high death-rate.

DEATHS.

The Deaths registered in the Borough during the year number 8,330, consisting of 4,390 males, 3,939 females, and 1 sex not known. These 8,330 deaths, which are equal to an annual death-rate of 22·40 per 1,000 persons living, compare very favourably with the numbers in previous years. In 1874 the total number of deaths registered was 9,665, and in 1875, 9,668. There is thus a saving of more than 1,300 lives, as compared with either of the two previous years, or more correctly, assuming the population to be the same for the three years, there is a saving of 1,450 lives compared with 1875, and 1,600 lives compared with 1874. The following are the death-rates for the past ten years :—

1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	Average of 10 years.
24·03	25·6	25·9	23·1	23·0	24·9	23·1	24·8	26·8	26·3	24·75

The death-rates per 1,000 of the population of Birmingham and the principal large towns for 1876, and the three preceding years, are as follows :—

	Average of 20 large towns.			London.	Norwich.	Birm.	Livrpl.	Mchestr.	Leeds.	Newcastle.
1876	...	23·6	...	22·3	21·9	22·4	27·6	29·2	25·1	22·8
1875	...	25·4	...	23·7	24·5	26·3	27·5	29·9	26·4	26·1
1874	...	25·4	...	22·5	23·5	26·8	32·0	30·4	28·7	29·2
1873	...	24·4	...	22·5	21·5	24·8	25·9	30·1	27·6	30·1

The subjoined table gives the total number of deaths, the number of each sex, and the death-rate for each quarter of the year, and the totals for each of the past four years :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total, 1876.	Total, 1875.	Total, 1874.	Total, 1873.
Total ...	2,431	1,968	2,089	1,842	8,330	9,668	9,665	8,990
Males ...	1,263	1,024	1,141	962	4,390	5,044	4,993	4,695
Females ...	1,168	943	948	880	3,939	4,623	4,672	4,295
Sex unknown	—	1	—	—	1	1	—	—
Death-rate ...	26·15	21·17	22·47	19·81	22·40	26·34	26·78	24·81

The deaths were distributed among the ten Registration Sub-Districts as is represented by the following table :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total, 1876.	Total, 1875.	Total, 1874.	Total, 1873.	Death-rate per 1,000 persons living 1876.
Ladywood (H.) ...	247	199	230	214	890	1,090	1,017	1,007	18·7
St. Thomas (H.) ...	227	217	199	162	805	932	890	872	20·4
St. Martin ..	284	241	294	209	1,028	1,068	1,096	1,042	23·6
St. Philip ..	67	62	77	65	271	332	366	273	20·1
St. Mary ...	110	87	85	65	347	394	407	425	22·9
St. George (H.) ...	405	301	316	264	1,286	1,568	1,502	1,580	24·8
All Saints (W., L., B. H.)	362	249	234	260	1,105	1,354	1,417	1,203	31·7
Deritend ...	330	301	321	308	1,260	1,365	1,414	1,194	21·1
Duddeston ...	331	254	266	240	1,091	1,292	1,292	1,161	21·8
Edgbaston ...	68	57	67	55	247	273	264	233	12·2

The comparatively high death-rates in All Saints' and St. George's districts are due to the existence in them of Hospitals, and other large institutions of a similar kind.

On comparing the totals for the two years, 1875 and 1876, it will be found that there is a diminution in the number of deaths in every one of the Registration Sub-Districts, and this diminution is proportionately greatest in

the Sub-Districts of St. Philip, Duddeston, St. George, and Ladywood. The next table shows the distribution of deaths among the sixteen Wards of the Borough.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL.
Rotton Park (W.B.H.)...	279	203	172	214	868
All Saints' (L.) ...	172	114	134	131	551
Ladywood (H.) ...	114	90	131	99	434
St. Paul's ...	118	102	91	88	399
St. George's ..	171	122	101	85	479
St. Stephen's ...	132	109	128	90	459
St. Mary's (H.) ...	230	158	171	161	720
St. Bartholomew's ...	179	161	165	132	637
Market Hall ...	86	73	128	84	371
St. Thomas' (H.) ...	195	179	144	123	641
St. Martin's ...	127	132	133	117	509
Edgbaston ...	81	67	89	57	304
Deritend ...	151	134	155	114	554
Bordesley ...	121	100	111	132	464
Duddeston ...	123	100	106	96	425
Neehells ...	152	124	130	109	515
TOTAL ...	2,431	1,968	2,089	1,842	8,330

In the following statement is given the number of deaths at various ætal periods for each of the quarters of 1876, and the totals for that and the three preceding years :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total. 1876.	Total. 1875.	Total. 1864.	Total. 1873.
Under 1 year of age ...	630	526	832	550	2,538	2,958	2,688	2,627
Between 1 and 5 years of age	440	328	262	314	1,344	1,828	1,901	1,797
" 5 and 10 "	82	68	64	76	290	286	476	378
" 10 and 20 "	78	94	71	61	304	357	467	351
" 20 and 40 "	280	274	241	225	1,020	1,225	1,295	1,064
" 40 and 60 "	447	320	316	310	1,393	1,424	1,379	1,252
" 60 and 80 "	414	307	257	267	1,245	1,345	1,271	1,312
At 80 years and upwards	60	51	46	39	196	245	188	209

It is thus seen that the number of deaths is this year lower than last year at each of the ætal periods, except that between 5 and 10 years of age, at which the number of deaths shows a very slight increase. The decrease is relatively greatest between 1 and 5, 10 and 20, and 20 and 40 years of age and at 80 years and upwards, amounting at the first-named period to nearly 27 %. The large decline in the death-rate at this period of life is almost entirely due to the smaller number of deaths from the Zymotic class of disease. The decrease at the other periods is occasioned by the non-fatality of Small-pox during the year and by the smaller mortality from many of the *Local* diseases.

INFANT MORTALITY.

The following are the percentages of deaths of infants under 1 year of age to 100 Registered Births in the principal large English towns :—

	Average of 20 large English Towns.		London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1876 ...	16·7	...	15·7	17·8	16·0	20·8	18·0	18·1	16·7
1875 ...	17·6	...	16·2	21·0	19·6	21·0	18·4	19·7	18·7
1874 ...	17·5	...	15·6	17·8	17·8	23·3	19·7	19·9	19·8
1873 ...	17·4	...	16·0	16·1	18·1	21·3	20·0	19·4	18·7

The above figures shew that our infant mortality has decreased from 196 to 160 per 1,000 Births registered. This is partly due to the considerably smaller fatality of Infantile Diarrhœa.

The percentage of deaths of infants under one year of age on the total registered Deaths is:—

	Average of 20 large English Towns.			London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1876	...	26·9	...	25·7	27·0	30·5	29·6	24·5	29·9	30·4
1875	...	26·2	...	24·4	28·0	30·6	29·4	24·3	30·1	29·1
1874	...	26·4	...	24·9	24·0	27·8	28·2	25·4	28·8	27·5
1873	...	27·0	...	25·2	24·5	29·2	30·4	25·7	28·0	27·1

Taken in relation to total deaths, our infant mortality still remains higher than in any of the other large towns. The Death-rate under one year to 1,000 persons living was 6·8, and in this regard was less than in the other large towns, except London and Norwich, as seen below.

London.	Norwich.	Liverpool.	Birmingham.	Manchester.	Leeds.	Newcastle.
5·7	5·9	8·1	6·8	7·1	7·5	6·9

Further particulars upon the causes of death, ages at death, number of each sex, and distribution of the deaths, will be found in Tables III., IV., V., and VII. to XI., inclusive.

METEOROLOGY.

From the weekly Meteorological returns, kindly supplied by Mr. D. Smith, F.R.A.S., of 63, Bloomsbury Street, Birmingham, I find that the

		1876.	1875.	1874.	1873.
Mean Temperature for the 1st Quarter, was		39°·0	40°·4	41°·4	39°·0
"	2nd "	51°·2	53°·7	53°·2	51°·8
"	3rd "	61°·3	60°·0	59°·9	59°·1
"	4th "	46°·2	42°·5	41°·6	44°·5
"	Year	49°·4	49°·1	49°·0	48°·6

Compared with 1875, the 1st and 2nd quarters were colder, while the 3rd and 4th quarters and the whole year were warmer. The amount of rain corresponds with the average rainfall of the last ten years, but is as much as 6½ inches less than that collected during 1875.

ZYMOTIC DISEASES.

The deaths from the Zymotic diseases amount to 1,336, against 2,145 in 1875, 2,652 in 1874, and 2,125 the average number for the five years 1871—5 inclusive. These 1,336 deaths are equivalent to an annual death-rate of 3·59 per 1,000 persons living, against a rate of 5·86 in 1875, and 7·35 in 1874. The subjoined figures give the rates in the principal large towns:—

	Average of 20 large English Towns.			London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1876	..	4·1	...	3·6	2·9	3·6	6·1	5·2	4·5	2·5
1875	...	4·4	...	3·9	4·3	5·9	4·5	4·6	4·6	3·6
1874	...	4·5	...	3·3	2·0	7·3	8·4	5·5	6·3	5·5
1873	...	3·9	...	3·3	2·2	5·6	4·0	5·9	5·6	6·8

Our Zymotic rate has thus fallen below the average rate for the 20 large English towns, and is now equal to that of London.

The per-centage of deaths from Zymotic diseases upon total deaths from all causes is 16·0, compared with 22·2 last year, 27·4 in 1874, and 23·8, the average of the 5 years 1871—5 inclusive.

The following are the percentages of deaths from the 7 principal Zymotic diseases upon the total deaths in the principal large English towns :—

Average of 20 large English Towns.		London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.
1876	... 17·3 ...	16·1 ...	13·2 ...	16·0 ...	22·1 ...	17·8 ...	17·8 ...	11·0
1875	... 17·5 ...	16·5 ...	17·6 ..	22·2 ...	16·4 ...	15·5 ...	17·4 ...	13·8
1874	... 18·0 ...	14·9 ...	9·0 ...	27·4 ...	25·2 ...	19·7 ...	22·0 ...	18·6
1873	... 16·3 ...	14·9 ...	10·1 ...	23·8 ..	19·1 ...	19·7 ...	20·9 ...	22·6

Of the 1,336 deaths from Zymotic disease, 651, or nearly one-half, were caused by *Diarrhœa*; of the other Zymotics, *Scarlatina* has proved the most fatal with 204 deaths; then follow *Whooping Cough* with 189, *Fever* with 147, *Measles* with 87, and *Diphtheria* with 58 deaths.

The subjoined statement shews the number of deaths from the 7 Zymotic diseases in each of the years 1873, 4, 5, and 6 :—

	1873.	1874.	1875.	1876.
Diarrhœa...	728 ...	622 ...	868 ...	651
Scarlatina	587 ...	737 ...	265 ...	204
Fever ..	203 ..	201 ...	204 ...	147
Whooping Cough	169 ..	242 ...	438 ...	189
Measles ...	123 ...	139 ...	141 ...	87
Diphtheria	107 ...	74 ...	55 ...	58
Small-Pox	125 ...	637 ...	174 ...	0

The percentage of deaths from *Diarrhœa* to total deaths has decreased from 8·0, the average of the 5 years 1871-5, to 7·8 in 1876; *Scarlatina* from 4·7 to 2·45; *Fever* from 2·2 to 1·8; *Whooping Cough* from 3·2 to 2·25; *Measles* from 1·9 to 1·0; *Diphtheria* from ·9 to ·7, and *Smallpox* from 2·9 to 0·0.

DIARRHŒA

has this year caused 651 deaths as compared with 868 deaths in 1875, and an average of 712 deaths in the 5 years 1871-5. The majority of the deaths occurred in the Summer quarter, when the death-rate from this disease alone was 5·3 per 1,000 persons living against a rate of 6·8 in the Summer quarter of last year. The Registration Sub-Districts of St. George and Deritend have experienced the largest mortality from this class of disease. Of the 651 deaths certified from this cause, 478 or 73·4 per cent occurred in infants under 1 year of age, and 588 or 90·3 per cent occurred in children under 5 years of age, so that only 63 deaths from *Diarrhœa* remain to be divided among all the atal periods above 5 years of age. In my last Annual Report I remarked upon the principal causes of the mortality from this disease, and of its incidence upon young children. The *diarrhœa* death-rate though much lower is still very high. The *Diarrhœa* death-rate of some of the principal large towns for 1876 is as follows :—

London.	Norwich.	Birmingham.	Manchester.	Liverpool.	Leeds.	Newcastle.
1·0	1·5	1·7	1·6	1·3	1·7	1·1

After *Diarrhœa* next in order of fatality stands

SCARLATINA,

which has been fatal to 204 persons against 265 in 1875, and 737 in 1874. This disease was very prevalent in the Sub-Districts of Deritend and Bordesley during the latter part of the year.

With a view to prevent the spread of this disease by means of the association of children I issued the following bill to all the public schools in the Borough.

BOROUGH OF BIRMINGHAM.

Medical Officer of Health's Department, Public Offices.

SCARLET FEVER, always more or less prevalent, has been on the increase for some weeks past ; THE DISEASE IS VERY CATCHING, as well as fatal ; it is therefore highly desirable that every effort should be made to prevent its spread. CARE SHOULD BE TAKEN THAT CHILDREN SUFFERING from the disease, in however mild a form, BE KEPT AT HOME, and as much as possible *separate from all other Members of the Household* ; that the Healthy Children in the same house also be kept at Home during the illness and convalescence of the patient, and allowed to mix with others only upon a Certificate from a Medical Practitioner, to the effect that danger of Infection has ceased ; and that children suffering from other Catching Diseases, such as SMALL-POX or MEASLES, be submitted to the same regulations.

The Heads of Schools, Parents, and others are requested to forward to the Medical Officer of Health *information of Cases of any Infectious Disease* coming within their knowledge, and they are hereby informed that cases of Small-pox or Scarlet Fever are treated FREE OF CHARGE, at the Borough Hospital, which is furnished with a complete staff and every necessary appliance. Proper conveyances to the Hospital are provided.

After illness from Infectious disease, it is necessary to purify the clothing used in the sick room, &c. ; for this purpose an efficient Disinfecting Apparatus has been established, and such Clothing will be removed, disinfected, and returned, *without cost* to residents in the Borough, on application being made to this department.

ALFRED HILL, M.D.,

Medical Officer of Health

November, 1876.

I also sent the following circular to the members of the Medical Profession :—

BOROUGH OF BIRMINGHAM,

MEDICAL OFFICER OF HEALTH'S DEPARTMENT,

PUBLIC OFFICES,

October 19th, 1876.

DEAR SIR,

I am requested by the Health Committee to draw your attention to the Borough Hospital, at Birmingham Heath, which is provided with every appliance for the isolation and treatment of Small-Pox and Scarlet Fever cases.

The Committee is afraid that the Institution, which is open to all persons residing in the Borough, is not sufficiently known, and they will be glad if you will assist in bringing it under the notice of such persons as are likely to avail themselves of its advantages.

An Ambulance is provided for each class of cases, and will be sent for the patient on information and a medical certificate being forwarded to me.

For each Medical Certificate to the effect that a patient, not being a pauper, is suffering from Small-Pox or Scarlatina, and is fit for removal to the Borough Hospital, a fee of Two Shillings and Sixpence will be paid after removal.

I beg to remain, dear Sir,

Yours faithfully,

ALFRED HILL, M.D.,

Medical Officer of Health.

After Scarlatina comes

WHOOPING COUGH,

with 189 deaths, against 438 in the previous year. This disease has been most fatal in the Registration Sub-District of St. George.

Next to Whooping Cough in order of fatality is

FEVER,

with 147 deaths, of which 127 were certified from Typhoid, 15 from Simple Continued Fever, and 5 from Typhus.

The number of deaths from Fever has declined from 204 in 1875, and from 196 the annual average number for the five years—1871-5, to 147 in 1876; a lower number than in any year of which I have a record.

The number of deaths from Fever in each year since 1870 has been as follows:—

1870.	1871.	1872.	1873.	1874.	1875.	1876.
233	184	188	203	201	204	147

Typhoid Fever is emphatically a preventable disease like the other Zymotics, and it is seen to be diminishing considerably in the Borough, the number having fallen from 204 in 1875 to 147 in 1876.

This marked decline in the amount of fever is not confined to Birmingham. It has been noticed repeatedly by the Registrar General that this form of disease has undergone diminution in twenty of the large towns during recent years, and he views the improvement as a satisfactory proof of the practical value of modern sanitation.

The death-rate per 1,000 from fever in twenty large towns in England—

in 1870	amounted to	·90
in 1871	it fell to	·78
in 1872	it was	·60
in 1873		·59
in 1874		·58
in 1875		·52
and in 1876	it had fallen to	·45

Since 1870 the death-rate from fevers has fallen more than 36 per cent in Birmingham; in that year it was ·63 per 1,000 of the population, in 1871 it was ·53; in 1872, ·54; in 1873, ·57; in 1874, ·56; in 1875, ·56, and in 1876, ·40; so that the death-rate from this cause is lower than in the twenty large towns.

It is very gratifying to find that there is a corresponding diminution of mortality from the seven Zymotic diseases, this is well seen in the table of the principal Zymotics, on page 7, as well as in the comparison of the number of deaths from those diseases with that from all causes, as stated on the same page. In the Borough, Typhoid has generally occurred in one individual in a house, but in some cases more than one inmate has suffered. It has however never been epidemic, that is, wide spread and the result of a common cause acting over a large area, like an infected water supply for example, but has resulted from sanitary defects operating in particular localities or premises.

With reference to the 5 deaths reported as resulting from Typhus, I would remark that the fact of their appearing on the list is due probably to a want of accuracy in diagnosing Typhoid and Typhus, which, though presenting certain points of resemblance, are nevertheless essentially distinct. Typhus, which is a disease produced by want, overcrowding, and filth, never occurs, as far as my experience and observation go, in Birmingham; and if it should occur it would be likely, owing to its excessive infectiveness, to result in the production of many more than five cases in a year. It is true the old term for Typhoid was Abdominal Typhus, but if this is meant, the adjective ought to be inserted, as its omission conveys a wrong meaning, and entirely misleads; moreover it is much to be desired that an uniform system of nomenclature should be employed in certifying the causes of death, such as is recommended and set forth in the Nomenclature of Diseases drawn up by a joint Committee appointed by the Royal College of Physicians of London, and a copy of which is or should be in the hands of every Medical Practitioner.

Typhoid Fever is produced by excretal impurities; it may be conveyed from the sick to the healthy through either the air or water, and it appears possible that it may be produced *de novo* from excretal matters through the same media. It is generally acknowledged to be the result either of the drinking of water contaminated by such impurities, or of the breathing of sewer air and other gaseous exhalations. This brings me to the subject of defects in

HOUSE CONSTRUCTION,

particularly with reference to water-closets, sinks, and drains. This question is dealt with to some extent in "The Bye-Laws for regulating the Construction of New Streets and New Buildings" within the Borough, made and adopted by the Council last year. These Bye-Laws apply, however, only to new buildings, and do not touch the question of faulty construction of old ones. They provide for drainage with proper material, and ventilation of drains, to the satisfaction of the Surveyor, and one bye-law requires that "No owner of a new building shall allow any communication with the drains to be made within such building, except in the case of a water-closet fitted with a proper apparatus. Every such owner shall cause the waste-pipe from any sink, bath, or lavatory, the overflow-pipe from any cistern, and any pipe for carrying off waste water, to be taken through an external wall, and to discharge in the open air, over a channel leading to a trapped gully-grating at a suitable distance."

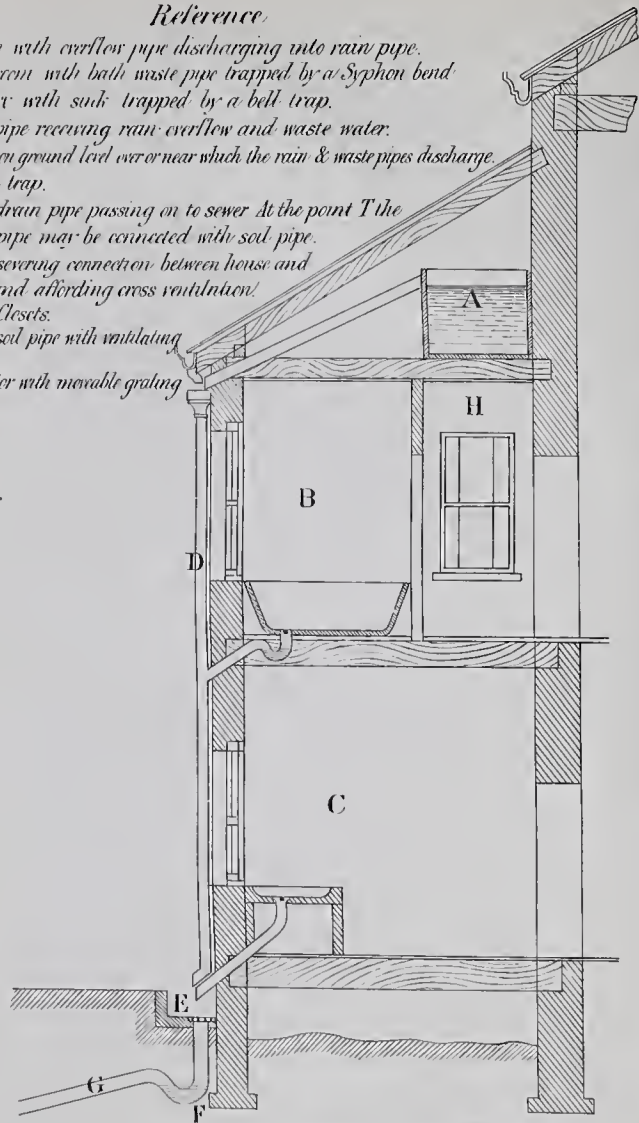
In many instances where the above bye-law is apparently complied with there are striking defects of arrangement leading to the introduction of sewer gas into the interior of houses, and the consequent production of certain zymotic diseases. This fact is constantly brought under my notice during my inspection of the arrangements in houses for the disposal of slops and other refuse, and sometimes I receive applications for information as to the best mode of getting rid of these, without risk to health. Safety depends upon so many precautions, simple enough when properly understood, but so seldom understood by either householder or builder, that I have thought it desirable to construct a series of drawings for the guidance of those who are in search of such information.

The first drawing on the annexed sheet shews the disposition of overflow and waste pipes; they are quite distinct from the soil pipe, and they are, as far as possible, *outside* the house. The water-cistern, if one exist, is not in direct communication with the waste pipe, and all the pipes finally discharge either upon or near a grated trap, and so are effectually cut off from the interior of the drain, the gas of which might otherwise enter the house or contaminate water supplied from the cistern. The bath is further protected by a plug and syphon bend, and the sink by a bell trap, which must be non-removable; it would be an advantage to protect sink pipes further by a syphon bend, since an incurrent of air would occur if the bell trap should by any chance become displaced. Such an incurrent is charged with impurities collected on the sides of the pipe itself, which, besides being offensive, are doubtless dangerous.

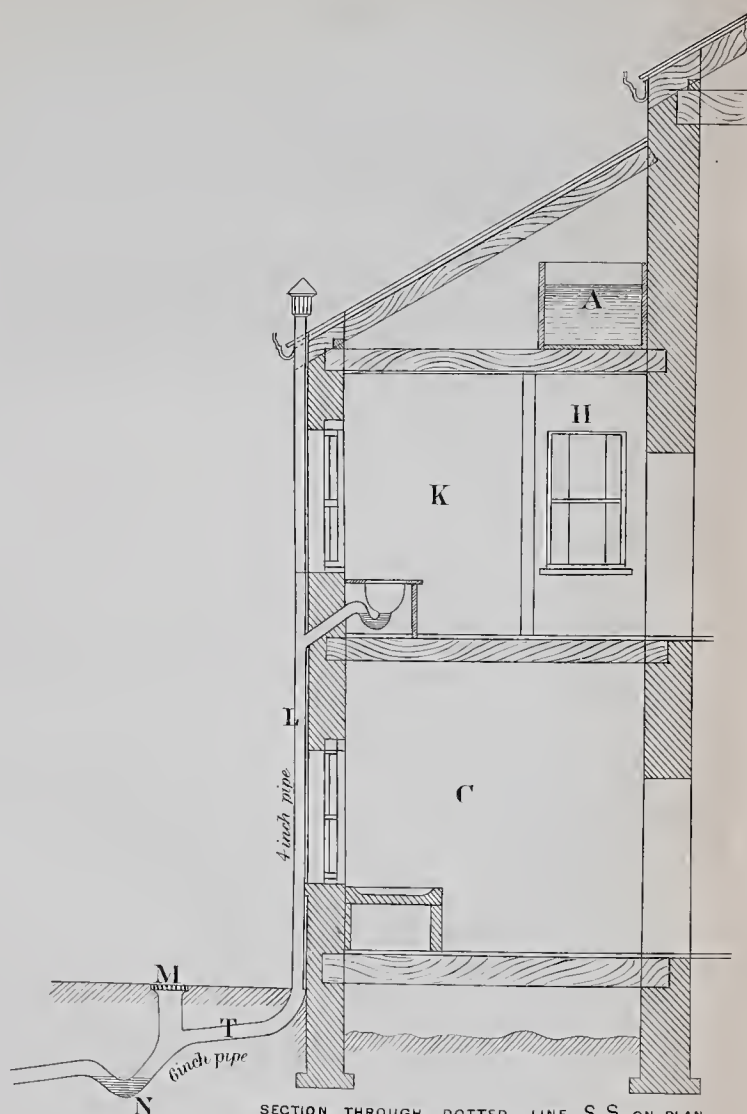
The second sketch represents the mode of arrangement of water-closet soil pipes, by which sewer or drain-air is prevented gaining access to the interior of the house through the water-closet. To begin at the distal end of the system, the sewer in the street is to be properly ventilated by a sufficient number of openings at the surface of the ground, by which undue pressure upon drain traps is prevented, and the first danger of the entrance of sewer-gas into the house is obviated. These sewer ventilators are provided by the Corporation.

Reference.

- A Cistern with overflow pipe discharging into rain pipe.
- B Bath room with bath waste pipe trapped by a siphon bend.
- C Scullery with sink trapped by a bell trap.
- D Rain pipe receiving rain-overflow and waste water.
- E Grating on ground level over or near which the rain & waste pipes discharge.
- F Siphon trap.
- G 6 inch drain pipe passing on to sewer. At the point T the drain pipe may be connected with soil pipe.
- H Lobby severing connection between house and closet and affording cross ventilation.
- K Water Closets.
- L 4 inch soil pipe with ventilating cow.
- M Ventilator with moveable grating.
- N Trap.

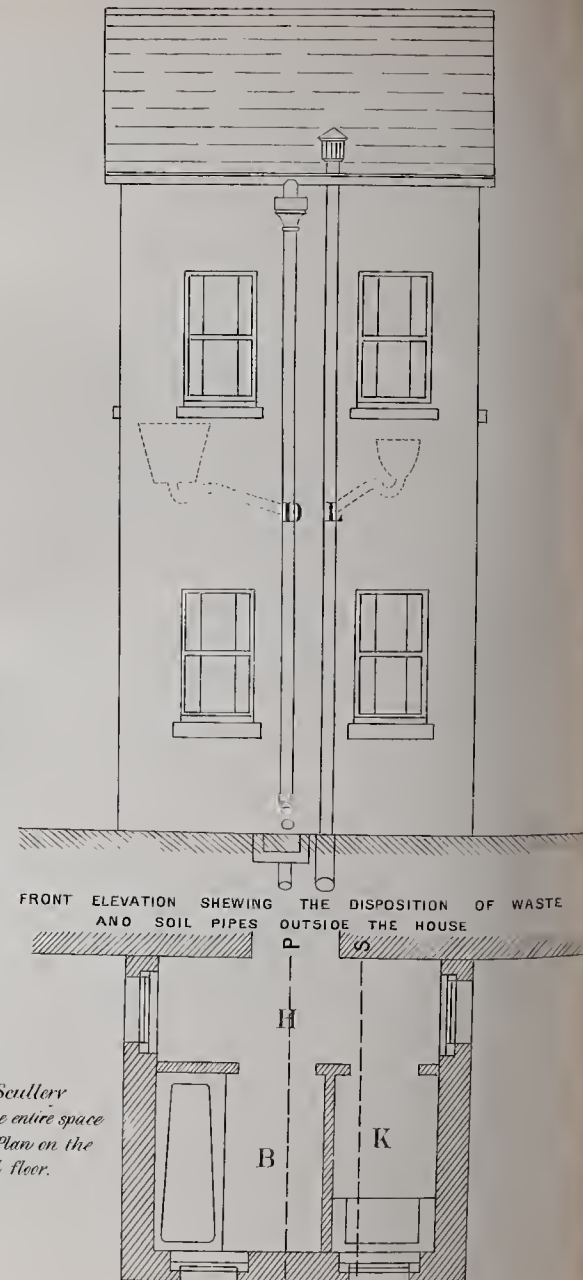


SECTION THROUGH DOTTED LINE P.P. ON PLAN.
SHEWING THE ARRANGEMENT OF PIPES FOR
CONVEYING SLOPS AND WASTE TO THE DRAIN.



SECTION THROUGH DOTTED LINE S.S. ON PLAN
SHEWING THE METHOD OF DISCONNECTING THE
WATER CLOSETS FROM THE SEWERS.

SCALE OF 5 0 5 10 15 FEET



FRONT ELEVATION SHEWING THE DISPOSITION OF WASTE
AND SOIL PIPES OUTSIDE THE HOUSE

Note The Scullery
occupies the entire space
below this Plan on the
Ground floor.

PLAN SHEWING BATH AND W.C. ON CHAMBER FLOOR

The next point in the arrangement is situated on the house premises, and consists of a syphon-bend **N** of a peculiar disposition and pitch, and a ventilator with moveable grating **M**, to admit of easy flushing and removal of obstructions should they occur. The entrance of sewer air into the closet **K** is still further opposed by the syphon trap connected with the soil pan. Danger of absorption of injurious gases or of pressure of sewer gas upon the water-valve at **N** or at the soil pan in the closet is further obviated by the connection of the wide soil pipe **L**, which, it is to be observed, is *outside* the house, with the ventilator **M**, and with the ventilating cowl or mere opening at its upper extremity; by this arrangement all undue pressure on the syphon traps is prevented by the establishment of a ventilating current commencing at **M**, passing downwards, then horizontally at **T**, ascending the soil pipe **L**, and finally escaping at the top. The house drain **G** may be connected with the six-inch pipe at the point **T**, forming a common channel to the sewer. In order to prevent the admission of impure air into the house from the closet itself, the closet should constitute a projection from the body of the house, and between them there should be a lobby **H**, admitting of cross ventilation by means of a window on each side. This arrangement is best seen in the Plan.

The third sketch shews the arrangement of waste and soil-pipes outside the house, and by the dotted lines their relation to the bath-room and water closet.

The question of properly draining houses and premises is one of such extreme importance to health, that where on inspection it is found necessary to either construct or reconstruct drains, I am of opinion that it is not sufficient to merely require of the owner that the work should be done, but that it should be done under the direction and supervision of a competent and responsible officer of the Corporation, controlled by the Borough Surveyor. The mere perfunctory performance of such work is worse than useless and actually leads to serious sacrifice of life. The ordinary mason does not understand the principles of draining and ventilation of drains, so as to provide against the dangers of sewer air; and it is vain to hope for a diminution of Typhoid, Diphtheria and allied ailments, as long as drainage is carried out in the present imperfect manner. Nothing less than special and experienced workmanship, under the control of the Corporation, will secure the object in view. I have conferred with the Borough Surveyor on this practically important question, and he concurs with me in the view here stated. I have also to express my acknowledgments and thanks to the Borough Surveyor for his kindness in placing at my disposal the assistance required in preparing the above drawings.

The appointment of an Inspector of Buildings is a very important step, and should be of great value in raising the character of buildings in the Borough. It is clearly as important to secure for new buildings the conditions necessary to health, as it is to improve the condition of old ones; for in the opposite case worse evils than already exist may arise, and may at no distant date call for further improvement schemes. The building of houses on made ground containing decomposing organic matter is a question deserving of the most careful attention, as the gases resulting from decomposition ascend into the houses to exert there their noxious influences.

In cases where it is impossible to avoid such artificial and impure foundations, a layer of good concrete several inches thick should be required to be laid down over the whole ground surface. The impervious nature of this material would prevent the ascent of organic vapours into the interior of the houses, and compel them to seek an outlet at points outside the walls, where they could do no harm.

The number of deaths from

MEASLES

has decreased from 141 to 87, while that from

DIPHTHERIA

has risen from 55 to 58.

SMALL-POX

has touched the Borough with a light hand, only a few cases having occurred during the year, and not a single death.

DEATHS AND DEATH-RATE FROM SMALL-POX PER 100,000 OF THE POPULATION.

Town.	Population.	Deaths from Small-pox in the year 1876.		Rate per 100,000.			
		1876.	1875.	1874.	1873.		
London ...	3,489,428	735	21.1	2.2	1.6	3.4	
Portsmouth ...	124,867	1	0.8	0.0	1.7	40.6	
Norwich ...	83,430	2	2.4	0.0	0.0	1.2	
Bristol ...	199,539	34	17.0	35.7	13.5	4.7	
Wolverhampton ...	72,549	0	0.0	0.0	1.4	2.8	
Birmingham ...	371,839	0	0.0	47.5	176.5	34.3	
Leicester ...	113,581	0	0.0	0.0	0.0	2.0	
Nottingham ...	93,627	0	0.0	0.0	0.0	0.0	
Liverpool ...	521,544	356	68.4	5.6	5.9	2.0	
Manchester ...	357,917	190	55.9	4.8	2.8	5.6	
Salford ...	138,425	347	250.7	23.8	3.0	3.0	
Oldham ...	88,609	7	7.9	3.4	1.2	1.2	
Bradford ...	173,723	1	0.6	1.8	37.4	13.4	
Leeds ...	291,580	4	1.4	7.0	12.2	41.1	
Sheffield ...	274,914	1	0.3	0.0	0.4	2.0	
Hull ...	136,933	0	0.0	1.5	2.3	20.3	
Sunderland ...	108,343	0	0.0	0.0	0.0	1.0	
Newcastle-on-Tyne ...	139,929	1	0.7	0.0	0.0	3.0	
In 18 Towns...	6,780,777	1,679	24.9	6.4	13.1	7.8	

This disease, which last year occasioned 174 deaths, has this year not proved fatal in a single instance, and only 11 cases have been reported during the year; they were all removed to the Borough Infirmary and have recovered.

The number of cases and deaths in each quarter, since the commencement of the epidemic in 1871, is seen in the following table:—

DATE.		Cases.		Deaths.	
1871.					
November 18th	to end of year ...	359		43	
Total		—	359	—	43
1872					
1st Quarter...	...	798		96	
2nd " ...	...	632		92	
3rd " ...	...	355		67	
4th " ...	...	192		44	
Total		—	1,977	—	299
1873.					
1st Quarter...	...	171		29	
2nd " ...	...	246		37	
3rd " ...	...	124		18	
4th " ...	...	253		38	
Total		—	794	—	122

1874.					
1st Quarter...	...	...	...	757	123
2nd " ..	...	...	...	1,303	196
3rd " ...	...	...	...	1,059	165
4th " ...	...	...	...	672	153
Total	...	...	...	3,791	637
1875.					
1st Quarter...	...	...	...	366	85
2nd " ...	...	...	...	347	72
3rd " ...	...	...	...	95	14
4th " ...	...	...	...	16	2
Total	...	...	...	824	173
1876.					
1st Quarter...	...	...	...	2	0
2nd " ...	...	...	...	2	0
3rd " ...	...	...	...	2	0
4th " ...	...	...	...	5	0
Total	...	...	...	11	0
GRAND TOTAL...	...	...	...	7,756	1,274

The continued absence of fatal Small-Pox is a matter of the warmest congratulation; but it is on every account desirable that there should be no relaxation of effort as to

VACCINATION AND RE-VACCINATION

on the part of the three different authorities in the Borough which have the management of them. It is much to be desired that vaccination and re-vaccination, like all other sanitary matters, should be vested in the Sanitary Authority. Divided action in such duties as the sanitary ordering of a town is unquestionably disadvantageous in many respects. All preventive measures, except that of vaccination, are at present vested in the Sanitary Authority, and the very cases which vaccination fails to reach or wholly protect are treated by the same Authority. It is therefore desirable that vaccination also in the Borough should be confided to the management of the Town Council.

There is no doubt considerable activity displayed in Vaccination, but I consider there is still room for improvement, when it is remembered that during the late epidemic, from 10·5 to 12·8 per cent. of the smallpox cases occurred in persons who had not been vaccinated, and out of the eleven cases which occurred last year one was un-vaccinated. It is probable that an equally large number of persons unprotected by vaccination still exists, and as we know by the experience of the Metropolis and other places, how especially virulent recent outbreaks have been, there is the greater reason for exerting activity in the adoption of preventive measures. The removal to the Borough Hospital of all the cases which have occurred in Birmingham, during the past year, has been of great value in preventing the spread of the infection, and demonstrates forcibly the immense importance of possessing the means of early isolation.

One of the great disadvantages experienced in attempts to prevent illness and death arises from the backwardness of parents and medical men in

REPORTING CASES OF ZYMOTIC DISEASE.

In the majority of instances the first intimation of the existence of such disease is obtained from the Registrar's Returns of Deaths, furnished each week. Action is then immediately taken with a view to prevent further mischief, and

such action is of course valuable, but it would be infinitely more so if information of the illness of the first case could be obtained; possibly its fatal issue might be warded off, and certainly the earlier action rendered possible would be more likely to prevent the further operation of such insanitary conditions as are always found in connection with cases of Zymotic disease. This question of locking the stable door *before* the steed is stolen has recently occupied much of the attention of Medical Officers of Health in all parts of the country; and it is felt to be of the last importance that reports of all cases of infectious disease should be made to the Medical Officer of Health as soon as their nature is made out. This can only be done by an enactment rendering it compulsory. Where the compulsion could be most properly brought to bear is a question which there ought to be no difficulty in deciding; taking the view "*Salus populi, suprema lex*," I can see no good reason against its falling on the medical men who have to diagnose the diseases, but if that should be thought objectionable, the report might be demanded from the parent or guardian or householder after learning from the medical man the nature of the disease. It is then only a question whether the medical man shall report directly or indirectly. That such early information is necessary if the public health is to be effectually improved is certain, and it would materially help forward and hasten the accomplishment of the desired object, if Town Councils were to support the efforts of sanitarians by memorialising Government on the question, or by such other action as they might deem expedient.

The Streets in which the larger numbers of deaths from Zymotic diseases have occurred are the following:—

Farm Street	...	18
High Street, Deritend	...	15
New John Street West	...	14
Coventry Road	...	13
Hingeston Street	...	13
Gooch Street	...	11
Greenway Street	...	11
Heath Street	...	11
Osler Street	...	11

THE BOROUGH HOSPITAL

has received during the year 49 cases, consisting of 38 cases of Scarlet Fever, against 26 in the year 1875, and 11 of Small-Pox against 420 in 1875.

Four of the Scarlet Fever cases terminated fatally, all the Small-Pox cases recovered. No other cases of Small-Pox than these eleven are known to have occurred in the Borough during the whole year. This perfect isolation of every case which happened cannot but have proved a great safeguard against the spread of the disease.

DISINFECTING STATION.

The Corporation disinfecting establishment, situated in Bacchus Road, commenced operations only on the 16th October, yet between that time and the end of the year no less than 672 infected articles had been submitted to the purifying process, viz.:—

Pillows	185
Mattresses	113
Blankets	92
Beds	56
Sheets	48
Counterpanes	37
Other Articles	141
Total	672

The process of disinfection consists of the application, for periods of time varying from two to six hours, of heat ranging from 235 to 250 degrees Fahrenheit. The plan is very convenient, economical, and safe, and in no case has any article been singed or otherwise injured.

The charge to persons living outside the Borough, for each stoving, is five shillings, and one shilling a mile for fetching and returning the articles. For the conveyance of the clothing, two close vans are employed, the one for infected and the other for purified clothing.

The working cost of the station during the eleven weeks, including men's wages, horses' keep, and gas, was £44. Of course the primary object is the prevention of the spread of disease, and not a pecuniary profit on the work performed, but it cannot be disputed that in arresting contagion, a result is obtained of great money value, although difficult of estimation.

BATHS.

It has often struck me that the advantages of the warm bath are much too little embraced by the bulk of the population ; there can be no doubt that the class which most requires frequent bathing is that which least employs it. The sweating grimy operative has not yet learnt the benefit of the frequent use of soap and water, and I cannot help thinking that greater encouragement might advantageously be offered in this direction. The bath is necessary for health as well as comfort, and in this regard it appears to me desirable that the fee charged by the Corporation should be reduced to the lowest possible limit.

WATER SUPPLY.

I have continued to analyse the Public Water Supply now in the hands of the Corporation, and the results of the analyses are to be found in Table XV. A comparison of these results with those of the analysis of the surface well waters will shew the superiority of the former. A reference to the Table will also shew that the average composition of the Corporation water in 1876 is superior to that of the same water in the year 1875, and as the works for filtration become completed, and the other measures in hand are carried out, the quality of the town supply must progressively improve. The water derived from the surface wells in the town displays the same dangerous impurities as I have before pointed out, and during the year the water of no less than 348 wells has been analysed, and 291 wells have been closed.

There is generally little difficulty in inducing landlords to close such dangerous wells when it is pointed out how impure the water is which they yield ; with some, however, and even in the case of tenants, there is a difficulty in persuading them that a water which looks clear and has no offensive taste or odour can possibly be injurious. Out of the large number of wells closed, it has been found necessary to resort to legal compulsion only in a few instances.

SEWAGE AND REFUSE DISPOSAL.

During the year 1876 eight miles of sewers were constructed in streets taken to by the Corporation and through private lands, and 4 miles through streets not taken to. The sewerage of the town is in course of extension. In the cause of public health it is much to be wished that the process could be expedited, for the absence of sewers means dirt, damp, discomfort and disease ; it prevents the conversion of the old ashpit system, and renders necessary the abominations known as dumb wells ; in localities so circumstanced Diphtheria, which is not only a very painful but very dangerous disease, is the most common.

A large number of the old ashpit privies have been converted during the year to pan privies. Nothing can be worse than the old ashpits, great offensive holes containing filthy liquid which too often percolates into cellars, dwelling rooms and wells, poisoning the air and the water, and disposing to all kinds of disease of the Zymotic and low types. It is very common to find disease in the particular houses of a court which are specially affected by the exudations and emanations of the ashpit.

During the year the pan system had been extended by the further introduction of 8,374 pans, the total number introduced being at the end of the year, 16,020.

THE PAVING

of the streets is being gradually extended, and constitutes an improvement which cannot fail to strike every one. The greater dryness, cleanliness, and comfort produced by it are very marked, and with the improvements of the appearance of the town there is brought about also an improvement of its health. A matter which, however, demands serious attention is the custom of the inhabitants of certain streets of throwing and sweeping refuse of all kinds into the roadways, and allowing it to lie there reeking and decomposing, to the annoyance and injury of the neighbourhood. Such proceedings are altogether unnecessary, as provision is made on every property for the suitable disposal of refuse matters, and as the Bye-laws of the Borough contain provision for the prevention of such nuisances, it is very desirable that the powers possessed and delegated to the police should be more actively exercised. It is only by constantly warring against the existence of filth of every kind everywhere, at all times, that the health of the Borough can be satisfactorily secured. A more complete and rapid system of scavenging would materially help in the same direction. At the end of the year there were 192 miles of streets, of these 148 $\frac{3}{4}$ miles had been taken to by the Corporation and 43 $\frac{1}{4}$ not taken to. In the former and through private lands there were 123 miles of Sewers, in the latter 32 miles. Seven miles of the carriage ways were paved, while two miles on tramway routes were partly paved and partly macadamised.

MORTUARIES.

Towards the end of the year, in October, the four Mortuaries authorised by the Council were opened : one in Moor Street, one in Duke Street, one in Kenion Street, and one in Ladywood. Up to the end of the year one body had been received at Duke Street and three at Moor Street, but none at either of the other two. Such buildings are not only useful for the reception of bodies upon which Coroner's inquests are to be held, but also for receiving others from houses where there is insufficient accommodation for the dead, and where in particular infectious disease has been the cause of death.

SANITARY WORK

generally has been energetically carried on during the year in reference to courts, dwelling-houses, lodging-houses, houses let in lodgings, slaughterhouses, bakehouses, workrooms, manufactories, chimneys, food of various kinds, the waters yielded by surface wells, removal of animals improperly kept, &c. Considerable activity has been exerted in the suppression of nuisances from smoke, four inspectors having been constantly employed on the work, and I think it must be admitted that the air of the town is freer from smoke than formerly, though there is still much room for improvement. Details of the work done in smoke prevention are given on Table VI.

The number of

SLAUGHTER-HOUSES

is much too great, it is impossible to keep such watch over them as to prevent the smuggling into the market, through them, of diseased meat; besides which, they are too frequently situated in unsuitable positions and unprovided with the necessary appliances, causing them to be sources of ill-health. There exist no fewer than 278 of these private slaughterhouses against 274 last year; 182 of them only are licensed, the remainder being registered. Instead of their number being increased, there is no doubt that every opportunity should be seized for effecting their diminution, with a view to their ultimate abolition and replacement by one or two public abattoirs.

THE KEEPING OF ANIMALS

in confined yards, attics, cellars, and other improper places, is a source of ill-health which is too much overlooked, and equally underrated. It is thought hard that the working-man in particular cannot be allowed to keep his pig or his fowls, and make a little profit out of them at the same time. It is, however, well established that animals so kept are not a source of profit; but even if they were, their being kept to the nuisance and injury of those who keep them and of the public cannot for a moment be justified. It is one of the simplest truths of sanitary science that every form of decomposing organic filth is highly injurious to health, and that being so, it is much to be desired that the custom of improperly keeping animals should be discouraged.

The number of notices served during the year 1876 for the removal of pigs and other animals kept in an improper condition is 892, viz. :—

Pigs	...	...	...	...	247
Fowls	...	...	...	...	459
Pigeons	...	...	...	...	113
Ducks and Geese	...	...	...	...	42
Rabbits	...	...	...	...	18
Donkeys	...	...	...	...	5
Horses	...	...	...	...	4
Other Animals	..	...	...	...	4
Total					892

The owners of the pigs consisted of :—

144 private persons.
 38 publicans.
 25 butchers.
 21 tradesmen.
 16 milkmen.
 3 tripe dressers.

—
 Total, 247

Regarding the amount of work done during the year, the increased development of our sanitary organization, and, above all, the improved health of the population, the Town Council in general and the Health Committee in particular, may be congratulated on the result of their heavy and important labours.

I have the honor to remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

ALFRED HILL, M.D.,

Medical Officer of Health.



TABLE I.
BIRTHS & DEATHS (GROSS NUMBERS).

DATE.	BIRTHS.	DEATHS.
1876	15,816	8,330
1875	14,862	9,668
1874	14,888	9,665
1873	14,497	8,990
1872	14,123	8,048
1871	13,443	8,594
1870	12,922	7,805
1869	12,779	7,737
1868	12,992	8,548
1867	13,029	8,318
1866	12,877	8,042
Average of Ten Years, } 1866—1875	13,641	8,541

NOTES.

- 1.—Population at Census, 1871, 343,787.
- 2.—Population, estimated to the middle of the Year, 1876, 371,839.
- 3.—Area in Acres, 8,400.
- 4.—Number of Inhabited Houses in Borough at Census, 1871, 68,532.
- 5.—Average number of Persons in each House at Census, 1871, 5·0.

TABLE II.

ANNUAL RATE OF MORTALITY, DEATH RATES AMONG CHILDREN, AND DEATHS IN PUBLIC INSTITUTIONS.

DATE.	Annual rate of Mortality per 1,000 living.	Deaths of Children under 1 year ; percentage to total Deaths.	Percentage of Deaths of Children under 1 year to Registered Births.	Deaths of Children under 5 years : percentage to total Deaths.	Percentage of Deaths in Public Institutions.
1876	22.4	30.5	16.0	46.6	11.6
1875	26.3	30.6	19.6	49.4	11.8
1874	26.8	27.8	17.8	47.5	11.8
1873	24.8	29.2	18.1	49.2	11.6
1872	23.1	29.1	16.6		12.0
1871	24.9	29.7	19.0		10.9
1870	23.0	29.9	18.1		11.4
1869	23.1				
1868	25.9				
1867	25.6				
1866	24.0				
Average of 10 Years, 1866—1875	24.75				

TABLE III.
DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM.

During the Year ending DECEMBER 30th, 1876

ESTIMATED POPULATION OF THE BOROUGH IN THE
MIDDLE OF THE YEAR 1870—371,839.

[illegible]

TABLE IV.

Mortality from certain classes of Diseases, and proportions to population and to 1,000 deaths in 1876 :—

CLASS OF DISEASES.	Total Deaths.	Death Rate per 1,000 of the population.	Proportion of Deaths to 1,000 Deaths.
1.—Seven principal Zymotic Diseases	1,336	3·59	160
2.—Pulmonary (other than Phthisis)	1,807	4·86	217
3.—Tubercular 	917	2·47	110
4.—Wasting Diseases of Infants ...	789	2·12	95
5.—Convulsive Diseases of Infants...	562	1·51	68

NOTES.

1.—Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhea.

3.—Includes Phthisis, Scrofula, Rickets, and Tabes.

4.—Includes Marasmns, Atrophy, Debility, Want of Breast Milk, and Premature Birth.

5.—Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE V.
SHEWING THE NUMBER OF DEATHS IN THE FIVE YEARS, 1871 TO 1875, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES,
AND THE NUMBER IN 1876.

	1871	1872	1873	1874	1875	Annual average of 5 years, 1871—1875.	Proportion of deaths to 1,000 deaths in 5 years, 1871—1875.	1876	Proportion of deaths to 1,000 deaths in 1876.
Small-pox ...	61	298	125	637	174	259	29·0	0	0·0
Measles ...	400	44	123	139	141	169	19·0	87	10·0
Scarlet Fever ...	127	409	587	737	265	425	47·0	204	24·5
Diphtheria ...	76	82	107	74	55	79	9·0	58	7·0
Whooping Cough ...	313	263	169	242	438	285	32·0	189	22·5
Fever ...	184	188	203	201	204	196	22·0	147	18·0
Diarrhoea ...	702	640	728	622	868	712	80·0	651	78·0
TOTAL ...	1,863	1,924	2,042	2,652	2,145	2,125	238·0	1,336	160·0
London ...	19,455	12,699	11,385	11,230	13,411	13,636	177·0	12,565	162·0

TABLE VI.

SANITARY WORK, YEAR ENDED DECEMBER 30TH, 1876.

No. of Nuisances reported by the Inspectors and inspected	...	...	13,073
Notices served for the Removal of Nuisances	...	...	9,788
No. of Structural Works completed	...	...	1,448
No. of Visits	...	...	42,275
No. of Nuisances removed on service of written notice by Inspectors...	...	...	13,522
No. of Summonses issued to remove Nuisances	...	...	1,473
Persons Convicted	...	...	1,470
No. of Filthy Houses and Workshops reported	...	...	3,575
No. of Houses reported where Contagious Disease has existed	...	...	430
No. of Houses or Parts of Houses reported unfit for human habitation	...	...	298

COMMON LODGING HOUSES.

Number of Visits by Day	...	...	4,673
" " Night	...	...	3,223

HOUSES LET IN LODGINGS.

Houses Registered	...	...	170
No. of Lodgers allowed in the Houses	...	...	949

SLAUGHTER HOUSES.

No. of Slaughter Houses	...	...	278
No. of Visits	...	...	17,246
Seizures of Bad Meat	...	...	210
Weight Destroyed	...	...	(lbs.) 23,648
Seizures of Fish, &c.	...	...	88

SMOKE.

No. of Registered Proprietors of Steam Engines	...	...	986
No. of Visits	...	...	7,471
No. of Observations	...	...	7,134
No. of Persons Summoned	...	...	181
No. of Persons Convicted	...	...	176
No. of Alterations in Boilers and Chimneys	...	...	61
Total Number of Chimneys	...	...	1,525

From January 1st, 1876, to December 30th, 1876.

Total

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,

During the Quarter ending APRIL 1st, 1876.

ESTIMATED POPULATION OF THE BOROUGH IN THE
MIDDLE OF THE YEAR 1876—371,839.

SEX		AGES.										ESTIMATED POPULATION OF EACH OF THE REGISTRAR'S SUB-DISTRICTS.										QUARTERLY TOTAL OF THE BOROUGH.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
TOTALS		MALES.					FEMALES.					LADWOOD H.					ST. THOMAS H.					ST. MARTIN'S.					ST. PETER'S.					ST. PHILIP'S.					ST. MARY'S.					ST. GEORGE'S H.					ALL SAINTS' W.L.					DEWENTON.					DUNSTON.					EDGBURGH.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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TABLE 12-

During the Quarter ending JULY 1st, 1876

ESTIMATED POPULATION OF THE BOROUGH IN THE
MIDDLE OF THE YEAR 1876—371,839.

* Sex unknown. I, under 1 year of age—St. Thomas's.

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,

During the Quarter ending SEPTEMBER 30th, 1876.

ESTIMATED POPULATION OF THE BOROUGH IN THE
MIDDLE OF THE YEAR 1876—371,839.

[illegible]

CAUSES OF DEATH.

Total

TABLE XII.

METEOROLOGICAL CONDITION OF THE AIR, AND AMOUNT OF RAINFALL FOR
THE YEAR ENDING DECEMBER 30TH, 1876.

Observed at 63, Bloomsbury Street, Birmingham, at 8.0 a.m., by
D. SMITH, Esq., F.R.A.S.

The Instruments are considered to be 340 feet above the mean level of the sea.

From the returns of the Registrar-General, the area within the Municipal Boundary of the Borough of Birmingham is taken at 8,400 acres, and the population estimated to the middle of the year, 1876, at 371,839.

1876. Months.	Pressure of Air.	TEMPERATURE OF THE AIR				RAINFALL. Gauge 8 inches diameter. Receiving surface 8 inches above the ground.		
	Barometer	Reading of Thermometer.				Depth of Rain depos- ited upon a square foot of sur- face, in inches and parts.	Measure- ment converted into weight per Acre.	Number of Days on which Rain fell, when $\frac{1}{160}$ ths of an inch or more was measured.
	Mean Monthly Reading (corrected and reduced to 32 degrees Fahrenheit)	Highest in Shade.	Lowest in Shade.	Range of Temp- erature in the Month	Mean Tempe- rature in the Month			
	In. Parts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	In. Parts.	Tons.	
January (4 weeks)	29·882	53°·3	22°·8	30°·5	36°·1	1·75	176	6
February 4 "	29·417	56°·0	21°·5	34°·5	39°·6	2·55	257	14
March 5 "	29·155	58°·0	24°·6	33°·4	40°·8	3·16	319	22
April 4 "	29·210	69°·3	29°·4	39°·9	47°·5	1·98	200	13
May 4 "	29·747	70°·4	31°·3	39°·1	48°·1	1·00	101	5
June 5 "	29·625	85°·0	43°·2	42°·8	58°·0	2·23	225	8
July 4 "	29·738	89°·7	44°·8	44°·9	65°·4	1·42	145	6
August 4 "	29·601	92°·0	40°·2	51°·8	62°·7	1·22	123	5
Sept. 5 "	29·367	74°·7	42°·6	32°·1	55°·7	5·83	589	21
October 4 "	29·495	69°·0	37°·3	31°·7	53°·0	2·26	228	9
Novem. 4 "	29·590	59°·9	26°·2	33°·7	43°·4	2·94	296	8
Decem. 5 "	29·062	58°·0	28°·0	30°·0	42°·9	5·68	573	19

The Barometrical pressure of the air for the year is 29·491, against 29·590 in the previous year. The readings were very low in September, April, March, and December, while the mean for January was a very high one. The reading of the Barometer at Greenwich, for December, was the lowest for any month of any year back to 1841. The mean temperature for the whole year is slightly above the average, being 49·4 against 49·1, the average of the ten years, 1866-75. July and August were unusually warm months, the mean temperature for each month being higher than that for any of the corresponding months of the last ten years. The Thermometer on one day in the third week in August registered no less than 92° in the shade. The rainfall for the year corresponds with the average annual fall for the last ten years. September and December were unusually wet months; while the amount of rain measured in May, July, and August, was considerably below the average. March has to be credited with the greatest number of wet days, and May and August with the fewest.

RAINFALL AND TEMPERATURE IN EACH MONTH AND YEAR FROM 1866 TO 1876.

COMPILED FROM OBSERVATIONS MADE AT 63, BLOOMSBURY STREET, BIRMINGHAM, BY D. SMITH, ESQ., F.R.A.S.

MONTH	1866.		1867.		1868.		1869.		1870.		1871.		1872.		1873.		1874.		1875.		AVERAGE FOR 10 YEARS, 1866—1875.		1876.				
	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	No. of days on which 3-faths of an inch or more was measured.	No. of days on which 3-faths of an inch or more was measured.	Temperature.				
January	2.210	42.4	3.765	34.0	2.290	37.9	3.460	41.6	2.285	38.0	1.485	32.5	4.750	21	40.4	19	41.4	1.86	10	3.12	16	2.97	14	39.4	1.75	6	36.1
February	2.565	39.9	1.605	44.3	1.890	43.1	3.075	45.3	2.300	36.0	1.730	42.5	3.410	15	43.8	11	38.2	2.685	9	1.675	10	2.269	11	40.4	2.55	14	39.6
March	2.075	39.5	5.660	36.5	2.920	44.1	2.500	36.2	1.660	40.6	1.240	44.1	2.365	12	44.0	14	44.6	1.72	16	8.81	5	2.361	11	43.0	3.16	22	40.8
April	1.075	47.3	2.430	37.6	1.935	47.9	1.825	49.8	0.915	49.1	3.850	47.6	3.925	10	47.6	7	50.5	1.45	5	1.09	7	1.926	8	46.4	1.98	13	47.5
May	1.055	49.8	0.950	52.9	1.675	56.9	5.745	50.2	1.300	53.9	2.165	53.6	2.265	11	49.3	12	50.5	3.24	7	2.10	12	2.274	9	52.2	1.00	5	48.1
June	3.930	59.7	1.800	57.8	0.190	61.3	1.210	56.4	0.785	60.7	3.005	54.7	5.770	15	58.3	9	58.5	1.13	5	3.915	15	2.338	9	58.4	2.23	8	58.0
July	2.105	60.6	2.485	59.4	0.395	65.3	0.580	63.6	1.270	64.2	4.550	59.5	3.565	11	65.0	11	64.0	1.26	8	8.14	13	2.95	9	61.4	1.42	6	65.4
August	4.065	58.2	2.490	61.5	5.515	62.2	1.260	60.6	1.720	61.0	2.180	61.7	3.810	10	60.3	18	60.1	1.985	14	1.80	7	2.826	10	60.9	1.22	5	62.7
September	6.205	54.5	3.590	57.4	2.470	57.6	4.105	58.2	0.800	55.4	6.010	55.5	2.645	8	57.0	8	56.4	4.545	19	3.89	14	3.639	12	56.5	5.83	21	55.7
October	2.570	50.3	2.885	48.7	1.920	47.0	1.660	49.6	6.215	50.5	1.955	49.6	4.650	19	47.1	9	51.2	2.71	12	7.21	16	3.36	12	48.9	2.26	9	53.0
November	2.350	44.6	1.010	40.6	1.815	41.5	2.035	44.3	2.195	40.7	0.835	37.7	3.475	18	44.3	10	41.6	1.45	10	3.31	10	2.03	9	42.0	2.94	8	43.4
December	1.895	42.8	2.400	38.4	6.065	44.9	4.905	36.5	2.205	32.8	1.615	39.0	4.505	17	41.1	5	33.9	4.375	16	1.45	10	2.837	14	39.0	5.68	19	42.9
YEAR	32.100	49.1	31.040	47.4	29.620	50.8	31.460	49.3	23.650	48.5	30.620	49.0	45.135	167	49.8	133	49.0	28.41	131	38.51	135	31.98	128	49.1	32.02	136	49.4

TABLE XIV.

NEW CASES OF DISEASE COMING UNDER TREATMENT DURING THE YEAR ENDING
DECEMBER 30TH, 1876, AT THE FOLLOWING INSTITUTIONS, &c.

DISEASES.	I. General Hospital.	II. General Dispnsary.	III. Queen's Hospital.	IV. Children's Hospital.	V. The Work- house.	VI. Out-door Pauper Patients.	VII. Boro' Hosptl.	TOTAL.
Small Pox .....	...	...	1	1	1	2	11	16
Measles	2	34	2	48	82	123	...	291
Scarlet Fever	3	33	18	68	...	96	38	256
Diphtheria	1	5	3	11	1	...	...	21
Whooping Cough ...	...	51	...	505	12	69	...	637
Croup .....	...	10	1	1	...	4	...	16
Diarrhœa	754	209	282	1,905	95	462	...	3,707
Dysentery .....	...	6	...	2	...	1	...	9
Asiatic Cholera .....	...	...	...	...	...	...	...	...
Erysipelas	17	42	42	9	49	34	...	193
Continued Fever.....	4	25	...	45	1	...	...	75
Typhus .....	...	...	...	...	...	...	...	...
Typhoid	19	42	31	13	10	2	...	117
Relapsing .....	...	...	...	...	...	...	...	...
Febricula	22	98	22	249	35	529	...	955
Ague.....	...	9	...	...	...	...	...	9
Rheumatic Fever ...	49	138	98	...	5	148	...	438
Puerperal Fever .....	..	1	...	...	...	2	...	3
Bronchitis & Catarrh	799	1,943	633	2,978	413	2,110	..	8,876
Influenza .....	..	77	...	...	...	5	...	82
Pleurisy & Pneumonia	56	212	73	72	20	36	...	469
Phthisis	333	1,816	705	202	167	171	..	3,394
Constl. Syphilis	113	179	400	323	257	12	...	1,284
All other Diseases ...	9,387	11,637	9,100	8,871	2,213	3,843	..	45,051
Accidents..	9,631	77	4,512	42	104	18	...	14,384
Totals	21,190	16,644	15,923	15,345	3,465	7,667	49	80,283

The above returns are made by (I.) Philip Bindley, Esq., M.B., and Robert Saundly, Esq., M.B.; (II.) Wm. Clibborn, Esq., M.B.; (III.) P. N. Hart, Esq., M.B., M.R.C.S.; (IV.) W. Moxon and J. Spofforth, Esqrs.; (V.) A. B. Simpson, Esq.; (VI.) W. G. Coulton, Esq., Clerk to the Guardians; (VII) William Bates, Esq., M.R.C.S., Surgeon to the Borough Hospital.

TABLE XV.—WATER: RESULTS OF ANALYSIS

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1876. CORPORATION WATER.					
Jan. 11th	Rear of 16, Aston Street ...	...	28·82	·248	·053
Feb. 9th	41 Court, Cheapside ...	5°·0	27·94	·262	·067
Mar. 10th	19 Court, Milk Street ...	7°·2	29·64	·385	·071
April 11th	Rear of 33, New Inkleys ...	10°·0	25·98	·362	·044
May 11th	Back 248—9, Sherlock Street ...	11°·1	23·40	·301	·068
June 8th	Rear of 44 and 45, Duddleston Row...	13°·3	28·20	·371	·073
July 10th	6 Court, Loveday Street ...	18°·3	22·30	·238	·064
Aug. 10th	7 Court, Digbeth ...	16°·1	23·40	·232	·072
Sep. 9th	2 Court, Holland Street ...	15°·5	20·60	·325	·063
Oct. 10th	Rear 45, Coventry Road ...	11°·6	23·80	·119	·054
Nov. 10th	Rear 112, Sherborne Street ...	5°·6	23·74	·168	·051
Dec. 9th	3 Court, Stafford Street ...	9°·4	23·76	·182	·074
	Average results, 1876 ...	10°·0	25·13	·266	·063
	" " 1875 ...	9°·8	27·70	·285	·082
WELL WATERS.					
Jan. 4th	16 to 20, Scholefield Street ...	...	229·4	...	very large
" 18th	29 Court, Latimer Street South ...	...	134·0	...	moderate
" "	37 Court ditto ...	...	160·0	...	"
" "	31 Court ditto ...	...	139·8	...	"
" "	Richmond Place ditto ...	...	140·8	...	very small
" "	Portland Place ditto ...	...	139·8	...	small
" "	25 Court ditto ...	...	112·6	...	"
" 27th	97, Varna Road ...	...	298·2	...	very large
" 28th	Melbourne Terrace, Latimer St. South ...	...	187·8	...	moderate
" "	12 Court ditto ...	...	107·8	...	"
" "	14 Court ditto ...	...	186·4	...	small
" "	Trafalgar Terrace ditto ...	...	101·6	...	moderate
" "	Waterloo Terrace ditto ...	...	120·2	...	small
" "	44 Court ditto ...	...	104·8	...	"
Feb. 3rd	116 and 117, Varna Road ...	...	166·0	...	very large
" 4th	133, Coventry Road ...	...	260·8	...	"
" "	Back 3, Upper Marshall Street ...	...	132·2	...	moderate
" 5th	25, Dymoke Street ...	...	134·4	...	very large
" "	404, Coventry Road (Scarlet Fever)...	...	144·4	...	moderate
" 8th	Alfred Terrace, Osler St. (Diphtheria) ...	...	107·2	...	moderate
" "	101, Herbert Road (Typhoid) ...	...	152·0	...	very large
" 10th	52, Cooksey Road (Scarlet Fever) ...	...	40·2	...	moderate
" 11th	Back 37, Vauxhall Road ...	...	58·6	...	"
" 12th	55, Cooksey Road (Scarlet Fever) ...	...	118·0	...	"
" 14th	262, Farm Street ...	...	140·2	...	very large
" 16th	2 Court, Devon St. (Typhoid Fever)...	...	77·4	...	moderate
" "	11 & 12 Court, Moseley St. (Dysentery) ...	...	179·2	...	"
" 19th	Blews Terrace, George Street West ...	...	105·8	...	"
" 21st	No. 2 Terrace, ditto ...	...	195·8	...	"
" 22nd	12, Braithwaite Road... ..	...	166·0	...	"
" 29th	19 Court, Irving Street ...	...	116·0	...	"
" "	26 Court, ditto ...	...	152·8	...	small
" "	33 Court, ditto ...	...	173·0	...	"
" "	34 Court, ditto ...	...	116·8	...	"
" "	35 Court, ditto ...	...	150·6	...	"
" "	37 Court, ditto ...	...	118·4	...	"

EXPRESSED IN PARTS PER 100,000.

Ammonia	Nitrogen as Nitrates. and Nitrites	Total Combined Nitrogen.	Previous Sewage or Animal Contain- ment. (Estimtd)	Chlorine.	Hardness.			REMARKS
					Tempor- ary.	Perman- ent.	Total.	
·002	·605	·659	5740	1·77	6°·1	12°·1	18°·2	Clear, with many suspended particles
·002	·275	·343	2440	1·42	7°·35	10°·85	18°·2	Pretty clear
·003	·150	·223	1200	1·77	8°·0	12°·0	20°·0	Ditto
·003	·148	·194	1190	1·70	3°·6	12°·8	16°·4	Turbid, numerous par- ticles and animalculæ
·002	·231	·300	2000	0·71	3°·4	10°·6	14°·0	Ditto
·002	·088	·163	580	1·65	7°·8	14°·2	22°·0	Slightly turbid
·001	·160	·225	1290	1·90	3°·4	9°·0	12°·4	Turbid
·000	·130	·202	980	1·70	6°·45	8°·71	15°·16	Clear, with suspended particles
·003	·176	·241	1360	1·91	5°·85	6°·71	12°·56	Turbid, numerous ani- malculæ and floating [particles]
·002	·121	·176	900	1·95	8°·81	10°·0	18°·81	Clear
·004	·330	·384	3010	2·30	8°·47	8°·43	16°·9	Pretty clear
·003	·352	·428	3220	1·70	6°·0	7°·0	13°·0	Slightly turbid
·002	·230	·295	1990	1·71	6°·27	10°·19	16°·46	
·0025	·166	·250	1420	1·78	6°·88	12°·5	19°·3	
·800	12·98	13·64	136000	25·53	...	...	...	Slightly turbid, some suspended particles
·004	6·49	6·493	64610	16·31	...	...	...	Clear, large particles
·004	8·14	8·143	81300	19·85	...	...	...	Clear, and many suspended particles
·006	4·84	4·850	48130	16·31	...	...	...	Clear, with suspended particles
·000	3·96	3·96	39280	13·47	...	...	...	Clear, little suspended matter
·002	5·28	5·281	52490	17·73	...	...	...	Ditto
·002	6·05	6·052	60200	15·60	...	...	...	Slightly turbid, with suspended matter
2·000	8·58	10·22	101880	25·53	...	...	...	Clear, with suspended particles
·002	9·90	9·901	98690	19·14	...	...	...	Ditto
·003	3·85	3·852	38200	12·05	...	...	...	Ditto
·002	7·70	7·701	76690	14·89	...	...	...	Turbid, with much suspended matter
·002	0·44	0·441	4100	12·76	...	...	...	Clear, much suspended matter
·004	5·50	5·503	54710	13·47	...	...	...	Ditto ditto
·002	1·375	1·376	13440	21·98	...	...	...	Ditto ditto
1·250	1·10	2·130	20980	17·00	...	...	...	Ditto ditto
3·000	14·85	17·320	172880	29·07	...	...	...	Clear
·003	1·65	1·652	16204	30·49	...	...	...	Slightly turbid
·004	1·65	1·653	16210	8·50	...	...	...	Turbid
·002	6·60	6·601	65690	13·47	...	...	...	Slightly turbid
·008	0·55	·556	5246	21·27	...	...	...	Clear, a few particles
1·166	2·20	3·16	31280	17·02	...	...	...	Clear, many particles
·004	·275	·278	2460	1·42	...	...	...	Clear, a few particles
·002	2·20	2·202	21690	5·67	...	...	...	Slightly turbid, large particles
·004	3·30	3·303	32390	2·48	...	...	...	Clear, several large particles
·002	4·40	4·401	43690	12·76	...	...	...	Rather turbid, numerous particles
·004	2·20	2·203	21710	5·67	...	...	...	Faintly turbid
·002	2·31	2·311	22790	12·05	...	...	...	Bright and clear
·002	3·85	3·851	38200	8·51	...	...	...	Slightly turbid
·002	9·02	9·021	89890	24·82	...	...	...	Rather turbid, with suspended matter
·112	3·41	3·502	34700	15·60	...	...	...	Clear, a little suspended matter
·004	4·95	4·953	49210	10·63	...	...	...	A little suspended matter
·004	8·47	8·473	84410	11·34	...	...	...	Ditto
·002	8·80	8·801	87700	19·85	...	...	...	Ditto
·004	5·50	5·503	54720	16·31	...	...	...	Ditto
·020	9·02	9·036	90040	18·44	...	...	...	Ditto
·002	6·60	6·601	65696	19·14	...	...	...	Slightly turbid

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity,	Organic Carbon.	Organic Nitrogen.
1876.	WELL WATERS—(continued).				
Mar. 6th	44, Talbot Street (Typhoid) ...	...	115·2	...	moderate
" "	61, ditto (Small-pox) ...	...	194·8	...	very large
" 7th	78 and 79, Varna Road ...	...	138·2	...	moderate
" "	98 and 99, ditto ...	...	202·8	...	excessive
" "	100 and 101, ditto ...	...	218·0	...	very large
" "	110 and 111, ditto ...	...	105·4	...	moderate
" "	112 and 113, ditto ...	...	241·4	...	very large
" "	114 and 115, ditto ...	...	276·2	...	"
" "	Back 72, Moland Street ...	...	300·2	...	"
" 9th	1 Court, Betholom Row ...	...	116·8	...	moderate
" 15th	Back 9, Talbot Street (Small-pox) ...	...	172·0	...	very large
" "	278, Heath Street ...	...	92·8	...	small
" 20th	15 to 18, Great Colmore Street ...	...	136·8	...	very small
" "	21, Great Colmore Street ...	...	144·8	...	small
" "	160, Bromsgrove Street ...	...	126·0	...	moderate
" "	10 and 11 Court, Tower Street ...	...	234·0	...	rather large
" "	67, Hurst Street ...	...	271·8	...	large
" "	25 and 27, Springfield Street West ...	...	282·4	...	small
" "	3 Court, Watery Lane ...	...	134·0	...	moderate
" "	2 Court, ditto ...	...	351·6	...	very large
" "	111 to 114, Aberdeen Street... ..	...	178·8	...	moderate
" "	138 to 140, Spring Hill ...	...	184·2	...	"
" "	224, Icknield Port Road ..	...	78·2	...	small
" "	259, ditto ...	...	164·8	...	rather large
" "	125 to 129, King Edward's Road ...	...	102·0	...	small
" "	42, Cato Street North (Typhoid) ...	...	103·8	...	"
" "	33 and 35, Springfield Street West ...	...	120·0	...	"
" "	29 and 31, ditto ...	...	194·0	...	"
" "	21 and 23, ditto ...	...	100·0	...	"
" 20th	Back 47, Coleshill Street ...	...	2424·0	...	large
" 31st	53 to 56, Lower Trinity Street ...	...	234·0	...	"
April 2nd	Lee Bank Road ...	...	112·0	...	...
" 11th	28, Frank Street ...	...	390·8	...	very large
" "	9 Court, William Edward Street ...	...	188·0	...	large
" "	4 Court, Dymoke Street ...	...	242·8	...	"
" 13th	9 Court, Milk Street ...	...	336·2	...	...
" "	8 Court, ditto ...	...	396·0	...	...
" "	Cambridge Crescent, Gough Road ...	...	83·5	...	very large
" "	Back 3, Galton Street ...	...	118·0	...	small
" "	Back 17, ditto ...	...	207·0	...	large
" 20th	Hyde Cottages, Hyde Road ...	...	172·0	...	...
" "	318 to 321, Icknield Street West ...	...	262·0	...	large
" "	17, Spooner Street ...	...	252·0	...	"
" "	38, Talbot Street (Fever) ..	...	128·8	...	...
" "	18 Court, Smith Street ...	...	66·0	...	small
" 22nd	1 and 2, Cambridge Crescent ...	...	198·0	...	large
" "	12 Court, Macdonald Street ...	...	359·0	...	"
" 24th	113, Lower Camden Street (Typhoid) ...	...	150·8	...	...
" "	129, ditto ditto ...	...	122·8	...	...
" "	Back 129, ditto ditto ...	...	122·8	...	...
" "	401, Coventry Road (Scarlet Fever)... ..	...	138·0	...	large
" 27th	Ship Yard, Ledsam Street (Typhoid) ...	...	92·8	...	rather large

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamin- ation Estimated	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·008	4·40	4·406	43740	15·95	...	...	...	Pretty clear
1·250	12·65	13·680	136480	21·98	...	...	...	Much organic matter and animalculæ
·002	1·87	1·871	18400	5·67	...	...	...
·400	6·38	6·71	66780	17·02	...	...	...	A little suspended matter
·300	6·05	6·297	62650	12·76	...	...	...	Ditto
·062	2·42	2·471	24390	9·22	...	...	...	Much suspended matter
·625	7·92	8·434	84020	12·05	...	...	...	A little suspended matter
·006	6·60	6·605	65730	12·76	...	...	...	Ditto
·400	18·70	19·030	189980	95·74	...	...	...	Turbid
·160	6·05	6·180	61500	11·34	...	...	...	Slightly turbid
·450	7·15	7·520	74890	19·14	...	...	...	Ditto
·004	5·50	5·503	54710	8·51	...	...	...	A little suspended matter
·004	9·24	9·243	92110	18·44	...	...	...	Clear, with suspended particles
·064	9·90	9·952	99200	19·14	...	...	...	Slightly turbid
·004	4·62	4·623	45910	16·31	...	...	...	Many suspended particles
·002	2·42	2·430	23990	42·55	...	...	...	Clear, with suspended particles
·062	13·86	13·910	138790	39·00	...	...	...
·002	13·20	13·202	131700	29·78	...	...	...	Bright and clear
·002	3·08	3·082	30490	16·31	...	...	...	A few particles
1·500	23·10	24·330	242980	41·13	...	...	...	Clear
·004	11·66	11·663	115990	23·40	...	...	...	Clear, much suspended matter
·010	6·93	6·938	69060	24·11	...	...	...	Much suspended matter
·002	3·19	3·192	31600	10·63	...	...	...	A little suspended matter
·050	8·91	9·320	92880	16·31	...	...	...	Clear, a little suspended matter
·003	7·04	7·042	70100	12·05	...	...	...	Much suspended matter
·004	3·52	3·523	34910	9·92	...	...	...	Clear
·002	5·39	5·392	53600	11·70	...	...	...	Pretty clear
·004	7·70	7·703	76710	17·73	...	...	...	A little suspended matter
·002	3·85	3·851	38200	8·51	...	...	...	Ditto
·028	16·50	16·523	164910	48·93	...	...	...	Pretty clear
·002	2·42	2·430	23990	42·55	...	...	...	Clear, suspended particles
·002	4·40	4·401	44000	17·02	...	...	...	Clear, one or two particles
0·0	·44	·440	4080	34·04	...	...	...
·002	1·65	1·652	16200	8·51	...	...	...
0·0	5·50	5·500	54680	22·69	...	...	...
·078	9·02	9·080	90520	37·23	...	...	...	Boils of a dirty brown colour
·348	15·84	16·123	160910	28·37	...	...	...	Ditto
·002	3·44	3·446	34150	7·09	...	...	...
·002	1·87	1·871	18400	4·96	...	...	...
·002	2·53	2·531	25000	7·80	...	...	...	Boils of a dirty colour
·012	6·93	6·940	69080	12·05	...	...	...
·004	12·87	12·873	128410	19·85	...	...	...
·004	9·35	9·353	93210	14·18	...	...	...
·198	10·78	10·943	109110	19·14	...	...	...
0·0	3·08	3·080	30480	4·96	...	...	...
0·0	7·15	7·150	71180	4·25	...	...	...
0·0	9·35	9·350	93180	37·58	...	...	...
·360	9·35	9·640	96080	9·92	...	...	...
·015	2·53	2·542	25100	12·05	...	...	...
·012	9·02	9·030	89980	22·69	...	...	...
·002	9·35	9·352	93200	12·76	...	...	...
·004	3·41	3·413	33800	8·51	...	...	...

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1876.	WELL WATERS—(continued).				
April 27th	Ship Yard, Ledsam St. (Scarlatina) ...	...	110·0	...	moderate
" 28th	Back 70 to 73, Moland Street ...	...	392·8	...	...
May 3rd	54, Highgate Lane ...	...	92·8	...	rather large
" 8th	123, Lodge Road ...	...	22·8	...	small
" 9th	14, Cato Street North ...	...	151·0	...	rather large
" "	74, Balsall Heath Road ...	...	98·0	...	moderate
" 10th	46, Lower Camden Street ...	...	82·8	...	small
" 11th	63 and 64, Stratford Road ...	...	50·0	...	rather large
" "	10, Balsall Heath Road ...	...	100·0	...	"
" 12th	18 and 19, Lee Bank... ..	...	360·0	...	small
" 16th	Back 144, Lancaster Street ...	...	196·0	...	...
" 17th	Back 175—178, Watery Lane ...	...	442·8	...	...
" "	121, New John Street West... ..	...	178·0	...	...
" 18th	Arthur Place, Icknield Port Road ...	...	374·0	...	moderate
" 25th	1 Court, Chester Street ...	...	278·0	...	...
" 26th	82, Meriden Street ...	...	56·0	...	small
" "	26, Nelson Street South ...	...	242·0	...	moderate
" "	Alpha Place, Kyrwick's Lane ...	...	140·8	...	large
" "	7 Court, Cregoe Street ...	...	170·0	...	small
" "	162, New John Street West... ..	...	200·0	...	...
" 27th	2 and 3 Courts, Stour Street... ..	...	176·8	...	rather large
" 30th	171, Bristol Street ...	...	139·0	...	moderate
" "	65, Bath Row... ..	...	106·0	...	none
" "	125, Great King Street ...	...	88·0	...	...
" "	25 Court, Bell Barn Road ...	...	182·8	...	trace
June 6th	5 Court, Lawrence Street ...	...	220·0	...	moderate
" 7th	Back 59, Cregoe Street ...	...	160·0	...	small
" "	9 and 10, Great Tindal Street ...	...	176·0	...	...
" "	13, Great Colmore Street ...	...	198·0	...	...
" "	12 and 13, Hurst Street ...	...	192·0	...	small
" "	154, Anderton Road ...	...	58·0	...	"
" "	27 Court, Bradford Street ...	...	186·0	...	...
" "	3 Court, Little Barr Street ...	...	228·0	...	large
" 8th	15 and 16 Courts, Well Street ...	...	202·0	...	...
" "	43 to 45, Spring Road ...	...	104·0	...	rather large
" 9th	72, Balsall Heath Road (Typhoid) ...	...	110·0	...	"
" 13th	11 Court, Vaughton Street ...	...	150·0	...	...
" "	32, Stone Yard (Typhoid) ...	...	152·0	...	moderate
" "	30—31, Great Barr Street ...	...	438·0	...	...
" "	44—45, Penn Street, Deritend ...	...	228·0	...	large
" 14th	31—33, Northumberland Street ...	...	260·0	...	very large
" "	14—15, Peel Street ...	...	100·0	...	...
" "	6 and 7 Courts, Ryland Road ...	...	154·0	...	...
" "	Redgrave's Terrace, Mole Street ...	...	78·0	...	small
" "	197, Golden Hillock Road ...	...	114·0	...	moderate
" "	118, Long Street ...	...	136·0	...	large
" "	450, New John Street West... ..	...	172·0	...	small
" 15th	317, Farm Street ...	...	248·0	...	...
" 22nd	246, New John Street West... ..	...	66·0	...	...
" 23rd	Barnes' Buildings, High Park Street... ..	...	86·0	...	small
" "	8 Court, Aston Road (Typhoid) ...	...	78·0	...	trace
" "	38—40, Blucher Street ...	...	110·0	...	rather large

(continued.)

Ammonia.	Nitrogen as Nitrates, and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimtd.)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·004	4·18	4·181	41500	4·61	...	...	...
·398	20·24	20·568	205360	74·46	...	...	...
·002	2·42	2·421	23890	7·09	...	...	...
·002	trace	...	0	5·49	...	...	...
·003	5·94	5·942	59100	13·47	...	...	...
·002	2·31	2·315	22830	4·42	...	...	...
·006	3·74	3·740	37080	7·80	...	...	...
·004	1·76	1·763	17300	4·25	...	...	...
·027	2·86	2·887	28560	11·34	...	...	...
·001	2·42	2·421	23890	20·56	...	...	...
·021	6·16	6·177	61450	23·40	...	...	...
·080	8·14	8·206	81740	14·18	...	...	...
·060	10·34	10·389	103570	19·50	...	...	...
·008	5·72	5·726	56940	6·02	...	...	...
5·100	11·00	15·200	151680	38·29	...	...	...
·001	·55	·550	5180	5·67	...	...	...
·003	6·93	6·932	69000	22·69	...	...	...
·003	2·42	2·422	23900	5·67	...	...	...
·003	6·05	6·052	60200	17·73	...	...	...
·013	2·42	2·431	23990	34·04	...	...	...
·002	11·00	11·002	109700	16·31	...	...	...
trace	6·05	6·050	60180	15·60	...	...	...
·002	6·60	6·602	65700	6·38	...	...	...
·700	2·86	3·440	34080	13·47	...	...	...
trace	11·00	11·000	109680	16·31	...	...	...
·008	10·45	10·456	104240	26·94	...	...	...
·006	9·02	9·025	89930	16·31	...	...	...
·900	·55	12·00	12580	41·84	...	...	...
·600	12·43	12·920	128960	22·69	...	...	...
·008	5·72	5·726	56950	28·37	...	...	...
·003	·44	·442	4100	4·96	...	...	...
·500	·22	·630	5980	24·11	...	...	...
·004	3·74	3·743	37110	33·33	...	...	...
·320	12·10	12·363	123310	25·53	...	...	...
·010	6·63	3·638	36060	5·67	...	...	...
·002	2·20	2·202	31700	2·83	...	...	...
·070	3·74	3·780	37660	14·18	...	...	...
trace	2·20	2·200	21680	19·14	...	...	...
·500	10·78	11·190	111580	82·26	...	...	...
0·002	4·84	4·848	48162	24·82	...	...	...
·004	6·82	6·823	67913	14·89	...	...	...
·120	3·85	3·949	39170	8·51	...	...	...
·200	9·35	9·514	94820	16·31	...	...	...
·003	·44	·442	4104	9·92	...	...	...
·002	4·84	4·842	48090	8·51	...	...	...
·006	6·93	6·935	69030	15·95	...	...	...
trace	6·60	6·600	65680	56·74	...	...	...
2·35	4·40	6·335	63030	53·18	...	...	...
·250	·44	·646	6140	7·2	...	...	...
·003	4·40	4·402	43704	8·8	...	...	...
·002	1·43	1·432	14000	17·7	...	...	...
·007	2·31	2·316	22840	23·5	...	...	...

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1876.	WELL WATERS—(continued).				
June 24th	262, Aston Road ... ..	...	264.0	...	...
" "	71—73, Gough Road... ..	...	80.0	...	moderate
" 26th	Back 32, Chester Street ... ..	...	122.0	...	...
" 27th	178, Lodge Road ... ..	...	144.0	...	...
" 28th	18—19, Lee Bank Road ... ..	...	124.0	...	small
" 29th	60, Priestley Road ... ..	...	110.0	...	large
" "	34, South Road ... ..	...	104.0	...	rather large
" "	32, Larches Street ... ..	...	108.0	...	...
" 30th	85—90, Aberdeen Street ... ..	...	120.0	...	...
" "	1—4, Peel Street ... ..	...	102.0	...	...
July 1st	272, New John Street West... ..	...	232.0	...	small
" "	119, Bloomsbury Place ... ..	...	256.0	...	...
" 3rd	38—41, Lower King Edward's Road ... ..	...	184.0	...	very small
" "	Berkeley Square, Coventry Road ... ..	...	88.0	...	small
" 4th	42 & 44, Lower King Edward's Road ... ..	...	173.0	...	trace
" 5th	260—265, Mount Street (Nechells) ... ..	...	150.0	...	small
" "	4 and 5, Cemetery Lane, Key Hill ... ..	...	220.0	...	moderate
" 6th	437—441, Park Road ... ..	...	130.0	...	trace
" 8th	34, Navigation Street... ..	...	174.0	...	moderate
" 13th	233, Bristol Street ... ..	...	202.0	...	...
" "	43, Alma Crescent (Fever) ... ..	...	213.0	...	...
" 15th	29 and 30, Navigation Street ... ..	...	...	...	small
" 17th	218, Cromwell Street... ..	...	94.0	...	small
" 18th	15, Bedford Road ... ..	...	180.0	...	very small
" "	7 Court, Navigation Street ... ..	...	150.0	...	small
" "	Wilkins' Buildings, Albert Street ... ..	...	106.0	...	small
" "	86, Clark Street ... ..	...	188.0	...	trace
" "	8—10, Vincent Street ... ..	...	268.0	...	moderate
" "	Back 303, Farm Street ... ..	...	214.0	...	...
" "	299, Ditto ... ..	...	72.0	...	...
" "	11—13, Saint Vincent Street ... ..	...	236.0	...	...
" 20th	1 Court, Gem Street ... ..	...	278.0	...	small
" "	Kersall Terrace, Victoria Street ... ..	...	166.0	...	...
" 21st	Back 126, Sherlock Street ... ..	...	186.0	...	small
" "	20, Hope Street ... ..	...	154.0	...	small
" "	24 Court, Lancaster Street ... ..	...	400.0	...	...
" "	31, Hope Street ... ..	...	142.0	...	small
" 26th	11 Court, Aston Road ... ..	...	94.0	...	moderate
" "	365—368, Coventry Road ... ..	...	64.0	...	...
" 29th	29, Grimley's Buildings, ^{William Henry} Street ... ..	...	142.0	...	...
" "	10 Court, Willis Street ... ..	...	144.0	...	none
" "	Orlando Place, William Henry Street ... ..	...	108.0	...	...
" "	36 Court, Cromwell Street ... ..	...	112.0	...	trace
" "	Back 295, Farm Street ... ..	...	129.4	...	...
" "	198 and 199, Bradford Street ... ..	...	161.0	...	trace
" 31st	14 Court, High Street, Bordesley ... ..	...	314.0	...	small
" "	58, William Edward Street, (^{Typhoid} Fever) ... ..	...	148.0	...	moderate
Aug. 1st	6 Court, Birchall Street ... ..	...	712.0	...	...
" "	3 Court, Brass Street... ..	...	124.0	...	small
" "	Veranda Terrace, Green Lanes ... ..	...	152.0	...	...
" "	12 Court, Nelson Street South (^{Scarlet} Fever) ... ..	...	183.0	...	...
" "	369—371, Coventry Road ... ..	...	158.0	...	...

(continued).

Ammonia	Nitrogen as Nitrates, and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimtd)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·500	11·66	12·07	120380	47·0	...	...	...
·004	1·76	1·763	17310	4·2	...	...	...
·003	7·04	7·042	70104	13·8	...	...	...
2·25	0·33	2·176	21439	15·1	...	...	...
trace	2·53	2·52	24980	23·2	...	...	...	Suspended particles
·060	3·30	3·35	33170	5·6	...	...	...
·008	3·30	3·306	32740	6·6	...	...	...
·150	6·63	3·753	37210	5·0	...	...	...
·175	6·60	6·744	67120	12·7	...	...	...
·600	5·61	6·104	60720	14·0	...	...	...
·025	9·13	9·15	91180	19·4	...	...	...
·400	8·03	8·36	83280	15·3	...	...	...
trace	5·72	5·720	56880	20·1	...	...	...	Turbid
·003	3·08	3·082	30820	5·3	...	...	...	Suspended particles
trace	7·81	7·810	77780	20·6	...	...	...	Ditto
·004	7·26	7·263	72310	11·6	...	...	...	Turbid
·003	14·85	14·852	148200	21·1	...	...	...	Suspended particles
·004	5·50	5·503	54710	11·2	...	...	...	Bright, suspended particles
·016	11·33	11·343	113110	30·6	...	...	...	Rather turbid
·070	7·70	7·760	77260	17·2	...	...	...	Ditto
·500	5·28	5·690	56580	21·0	...	...	...	Turbid
·001	8·03	8·031	80000	32·4	...	...	...	Ditto
·001	4·18	4·181	41490	8·1	...	...	...	Ditto
·002	5·94	5·941	59080	12·4	...	...	...	Suspended particles
·001	3·41	3·411	33790	30·4	...	...	...	Ditto
·002	9·90	9·902	98700	16·0	...	...	...	Ditto
trace	7·48	7·480	74480	8·9	...	...	...	Ditto
·012	3·85	3·860	38280	51·4	...	...	...	Ditto
2·500	8·91	9·116	90880	24·5	...	...	...	Ditto
·720	1·76	2·353	23210	7·5	...	...	...	A few suspended particles
·700	1·76	2·340	23080	58·3	...	...	...	Clear
·005	13·20	13·204	131720	33·5	...	...	...	Suspended particles
·200	7·92	8·080	80520	15·4	...	...	...	Many ditto
·001	5·50	5·500	54690	18·9	...	...	...	Pretty clear, suspended particles
·002	4·40	4·402	43980	18·4	...	...	...	Clear, suspended particles
·400	4·40	4·430	43980	83·9	...	...	...	Pretty clear
·004	2·42	2·423	23910	18·8	...	...	...	Clear, suspended particles
·001	1·10	1·100	10690	15·5	...	...	...	Very turbid
·030	1·10	1·124	10930	5·5	...	...	...	Turbid
1·600	3·08	4·398	43660	19·8	...	...	...
·006	7·15	7·155	71230	18·7	...	...	...
·015	3·30	3·312	32810	9·5	...	...	...
·008	4·40	4·406	43740	8·0	...	...	...
·800	4·29	4·950	49180	11·6	...	...	...
·006	5·50	5·505	54730	13·6	...	...	...
trace	10·56	10·560	105280	36·7	...	...	...
·005	1·32	1·324	12920	15·0	...	...	...	Large crystalline residue
·800	9·13	9·790	97580	40·7	...	...	...
·005	0·0	0·0	0	14·2	...	...	...
·320	7·37	7·630	76010	19·5	...	...	...
·720	17·81	8·453	84210	18·3	...	...	...
·560	7·70	8·161	81290	20·5	...	...	...

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.
1876.	WELL WATERS—(continued).				
Aug. 1st	14, Gooch Street (Typhoid Fever) ...	...	106·0	...	small
" 2nd	170, New John Street West... ..	...	146·0	...	...
" "	150, Farm Street ... ..	...	58·0	...	...
" "	Back 50, Devon Street ... ..	...	78·0	...	small
" "	Calton Terrace, Waterworks Road ...	...	138·0	...	...
" 3rd	37, Farm Street ... ..	...	314·0	...	...
" "	Back 39 and 40, Broad Street ... ..	...	182·0	...	very small
" "	149, Vauxhall Road ... ..	...	224·0	...	moderate
" 7th	104—108, Duke Street ... ..	...	340·0	...	...
" 11th	6 Court, Blueher Street ... ..	...	203·0	...	trace
" 15th	35 and 36, Ryland Street ... ..	...	118·0	...	"
" "	108, Lupin Street ... ..	...	182·0	...	moderate
" 22nd	Back 49, St. James Street ... ..	...	110·0	...	none
" 24th	257, Summer Lane ... ..	...	478·8	...	small
" 30th	122, Bridge Street West ... ..	...	124·0	...	"
" 31st	116, Ditto ... ..	...	90·0	...	"
Sept. 4th	3 Court, Essex Street... ..	...	226·0	...	large
" "	Davis' Buildings, Stony Lane ... ..	...	54·8	...	small
" "	6, Peel Street... ..	...	124·0	...	..
" "	95, Unett Street ... ..	...	100·8	...	small
" 6th	5 Court, Essex Street... ..	...	240·0	...	...
" "	1 Court, Hollier Street ... ..	...	133·0	...	small
" "	Ditto ... ..	...	132·0	...	"
" 7th	Kingston Place, St. Andrew's Street ...	...	116·0	...	"
" "	13 Court, Hurst Street ... ..	...	192·0	...	"
" 8th	9 and 10 Vine Street... ..	...	133·0	...	...
" "	Winson Bridge Place, Winson Green ...	...	70·0	...	...
" 9th	25 and 26, Pershore Road ... ..	...	77·0	...	very small
" 11th	17 Court, Nelson Street South ... ..	...	196·9	...	very large
" "	30 Court, Heneage Street (Scarlet Fever)	...	246·0	...	moderate
" 12th	12, Bellis Street ... ..	...	128·0	...	...
" "	St. Ives' Place, Coventry Road ... ..	...	122·0	...	...
" 15th	118, Coventry Road ... ..	...	126·0	...	moderate
" "	174 & 175, Gt. Lister St. (Diarrhoea) ...	...	122·8	...	small
" 16th	5, Braithwaite Road ... ..	...	60·0	...	Mod
" "	2, Pitsford Street (Scarlet Fever) ...	...	193·0	...	...
" "	William Edward St. (Typhoid Fever) ...	...	138·0	...	...
" "	163 and 104, Bellbarn Road... ..	...	194·0	...	...
" 16th	56 and 57, George Street West ... ..	...	66·8	...	...
" 19th	1 Court, Beach Street ... ..	...	88·0	...	large
" 22nd	96—100, Benaere Street ... ..	...	210·0	...	...
Oct. 2nd	51, Charlotte Road ... ..	...	83·0	...	moderate
" 4th	152, Park Road ... ..	...	50·0	...	large
" "	4, Lennox Street ... ..	...	264·0	...	rather small
" 5th	59, Washington Street ... ..	...	170·0	...	moderate
" "	120 and 121, Varna Road (Diarrhoea) ...	...	162·0	...	rather large
" "	120, Benaere Street ... ..	...	192·0	...	"
" 6th	12, Spring Hill ... ..	...	128·0	...	large
" 7th	119, Bloomsbury Place ... ..	...	149·0	...	moderate
" "	Moody's Buildings, Key Hill ... ..	...	144·0	...	"
" 12th	103—105, Belgrave Road (Typhoid) ...	...	276·2	...	very large
" "	34, Gladstone Road (Typhoid) ... ..	...	102·4	...	"

(continued).

Ammonia.	Nitrogen as Nitrates, and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination (Estimtd.)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·004	4·51	4·513	44810	14·5	...	...	...
1·600	8·80	10·118	100860	11·2	...	...	...
·003	2·97	2·972	29404	8·0	...	...	...
·002	3·08	3·081	34486	7·0	...	...	...
·600	7·15	7·644	76120	17·9	...	...	...
2·000	11·44	13·080	130480	21·7	...	...	...
·006	trace	trace	0	41·7	...	...	...
·001	12·43	12·431	123990	12·8	...	...	...
·550	10·56	11·013	109810	30·0	...	...	...
·006	12·10	12·105	120730	25·9	...	...	...
·001	7·15	7·151	71190	8·1	...	...	...
·003	7·15	7·152	71200	23·2	...	...	...
trace	6·38	6·380	63480	6·3	...	...	...
·005	20·90	20·904	208720	40·0	...	...	...
·004	3·30	3·303	32710	9·4	...	...	...
·004	1·65	1·653	16210	10·0	...	...	...
·012	12·32	12·330	122980	35·4	...	...	...	Clear and bright
·006	0·0	0·0	0	5·2	...	...	...	Clear, suspended partieles
1·000	8·91	9·610	95780	18·0	...	...	...	Bright
·008	4·95	4·956	49240	8·8	...	...	...	Ditto
·600	9·46	9·860	98280	36·0	...	...	...	Ditto, a few suspended partieles
·003	3·41	3·412	33800	10·1	...	...	...	Bright, suspended matters
·003	4·29	4·292	42600	9·4	...	...	...	Slightly turbid, with sus- pended partieles
·018	0·0	0·0	0	6·0	...	...	...	Clear
·004	6·27	6·273	61010	26·6	...	...	...	Bright
·560	4·18	4·641	46090	17·0	...	...	...	Clear, suspended matters
4·000	0·0	3·300	32680	5·5	...	...	...	Very turbid and much sus- pended matter; smelt
·002	3·85	3·852	38190	5·4	...	...	...	Bright [like sewage
·003	6·38	6·382	63504	15·5	...	...	...	Clear
·003	11·22	11·222	111900	32·2	...	...	...	Ditto
1·500	6·05	7·280	72480	12·5	...	...	...	Ditto
·030	6·60	6·624	65930	9·8	...	...	...	Ditto
·003	6·49	6·492	64600	11·4	...	...	...	Ditto
·004	6·49	6·493	64610	15·5	...	...	...
·004	1·10	1·102	10700	9·2	...	...	...	Clear, suspended matter
·200	5·90	10·065	100330	25·2	...	...	...	Clear
·018	·55	·565	5330	15·0	...	...	...	Clear, suspended partieles
5·000	9·02	13·120	130880	23·7	...	...	...	Large quantity of sus- pended matters
·012	·88	·890	8580	8·3	...	...	...	Clear, small quantity of suspended partieles
·002	3·30	3·302	32700	8·9	...	...	...	Clear
·024	8·80	8·820	87880	21·1	...	...	...	Ditto
·002	·99	·992	9590	3·2	...	...	...	Small quantity of sus- pended partieles
·009	1·32	1·327	12950	5·3	...	...	...	Turbid
·003	2·86	2·862	28304	9·8	...	...	...	Bright
·002	6·82	6·821	67890	29·2	...	...	...	Clear
·004	2·75	2·753	27210	22·2	...	...	...	Ditto
·002	3·30	3·301	32690	18·3	...	...	...	Ditto
·008	3·52	3·526	34940	25·8	...	...	...	Ditto
·008	6·60	6·606	65740	16·0	...	...	...	Suspended partieles and fibres
·002	9·46	9·461	94290	17·5	...	...	...	Clear, suspended matter
·002	8·80	8·801	87690	23·0	...	...	...	Clear
·003	3·30	3·302	32700	6·8	...	...	...	Ditto

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1876.	WELL WATERS.—(Continued.)				
Oct. 12th	47 & 48, Princess Road (Scarlet Fvr.)	...	92.0	...	large
" "	13 Court, Broad Street ...	...	138.0	...	"
" 13th	Malakoff Place, Wheeley's Road ...	...	166.0	...	rather large
" 16th	5 Court, High St., Deritend (Typhoid)	...	242.0	...	moderate
" 17th	18 and 19, Fordrough Street...	...	178.0	...	"
" "	Back 28, ditto ditto ...	...	166.0	...	rather large
" "	27, Wharf Street ...	...	226.0	...	large
" "	43—46, Fazeley Street ...	...	216.0	...	...
" "	87—90, Hatchett Street ...	...	190.0	...	...
" "	84—86, ditto ditto ...	...	162.0	...	...
" "	Back 27—30, Chester Street...	...	164.0	...	rather small
" "	Back 12—15, Ryland Street...	...	184.0	...	moderate
" "	53—57, Great Barr Street ...	...	229.0	...	"
" "	28—31, Heath Mill Lane ...	...	188.0	...	large
" "	3 Court, Bridge Street West...	...	126.0	...	"
" "	Kersall Terrace, Victoria Street	...	182.0	...	...
" "	72, Long Street ...	...	50.0	...	...
" "	102, Bordesley Green ...	...	88.0	...	very large
" 19th	154, Lennox Street ...	...	98.0	...	large
" 25th	Albert Terrace, Nelson Street South...	...	194.0	...	"
" "	Richmond Terrace, Nelson St. South	...	262.0	...	very large
" "	269 and 270, Watery Lane ...	...	112.0	...	large
" "	16, Green Lane (Scarlet Fever)	...	98.0	...	very large
" 26th	68 and 69, Upper Trinity Street ...	...	314.0	...	"
" "	126 and 127, High Street, Bordesley	...	170.0	...	moderate
" "	Herbert Terrace, Green Lane ...	...	174.0	...	...
" 27th	203, Coventry Road ...	...	78.0	...	large
" "	80, Ladywood Road ...	...	50.0	...	...
" 28th	36 and 37, Sun Street West...	...	218.0	...	...
" "	Wareham's Buildings, Watery Lane...	...	174.0	...	rather large
" "	65 Court, Farm Street (Scarlet Fever)	...	156.0	...	very large
" "	90, Herbert Road ...	...	154.0	...	...
" "	6, Burbury Street (Small-pox ...	...	212.0	...	...
" "	42—47, Harding Street ...	...	254.0	...	...
" 30th	174—177, Watery Lane ...	...	132.0	...	...
" "	Cambridge Place, Greenway Street ...	...	94.0	...	large
" 31st	49, George St. West (Typhoid Fever)	...	24.0	...	moderate
" "	64—70, Allcock Street ...	...	138.0	...	"
" "	59, George St. West (Scarlet Fever)	...	48.0	...	rather large
" "	182, Coventry Road ...	...	60.0	...	very large
" "	45—50, Phillip Street ...	...	116.0	...	very small
" "	24, Digbeth ...	...	56.0	...	large
" "	56, Herbert Road ...	...	136.0	...	moderate
Nov. 1st	Back 60, Cathcart Street ...	...	86.0	...	trace
" "	Back 88, Dollman Street ...	...	128.0	...	moderate
" "	243—247, Heath Street ...	...	100.0	...	...
" "	275, Bradford Street (Typhoid) ...	...	148.0	...	very small
" "	Back 22, Phillip Street (Scarlet Fever)	...	78.3	...	"
" "	5, Dawson Street (Scarlet Fever) ...	...	176.0	...	rather large
" 3rd	216 and 217, Icknield Street West ...	...	68.0	...	small
" "	72, Larches Street ...	...	124.0	...	rather large
" 9th	12 Court, Summer Lane ...	...	344.0	...	...

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination Estimated	Chlorine.	Hardness.			REMARKS.
					Tempo- rary.	Perman- ent.	Total.	
·005	trace	0·0	0	4·5	...	...	...	Clear
·004	5·72	5·723	56910	14·5	...	...	...	Clear
·005	1·10	1·104	10720	48·3	...	...	...	A few suspended particles
·003	5·83	5·832	58000	33·5	...	...	...	Clear
·004	5·94	5·943	59110	29·5	...	...	...	Clear
·002	5·28	5·281	52490	26·3	...	...	...	Clear
·003	6·82	6·822	67900	30·0	...	...	...	Clear
·400	4·62	4·950	49180	13·0	...	...	...	Clear
·180	10·12	10·268	102360	26·0	...	...	...	Suspended matters
·040	10·12	10·153	101210	22·7	...	...	...	Clear
·002	9·24	9·241	92100	33·7	...	...	...	Clear
·003	6·71	6·712	66800	24·0	...	...	...	Suspended matters
·004	5·50	5·503	54710	34·0	...	...	...	Much suspended matter
·004	3·30	3·303	32710	17·7	...	...	...	Clear
·005	5·72	5·724	56920	11·0	...	...	...	Suspended matters
·100	10·12	10·202	101700	21·8	...	...	...	Much suspended matter
·080	trace	·066	340	3·8	...	...	...	Ditto
·006	1·65	1·655	16230	5·1	...	...	...	Suspended matters
·007	3·30	3·305	32737	11·2	...	...	...	Clear
·005	6·38	6·384	63520	14·9	...	...	...	Clear
·004	9·90	9·903	98710	26·2	...	...	...	Clear
·006	3·08	3·305	30530	11·1	...	...	...	Clear
·007	3·63	3·635	36030	6·8	...	...	...	Suspended matters
·002	4·18	4·181	41500	25·0	...	...	...	Ditto
·001	4·18	4·180	41900	13·3	...	...	...	Slightly turbid
·300	9·90	10·147	101150	21·5	...	...	...	Clear
·006	1·32	1·325	12930	6·5	...	...	...	Clear
·100	15·40	15·482	154500	22·6	...	...	...	Much suspended matter
·135	9·02	9·131	90990	9·3	...	...	...	Clear
·003	6·82	6·822	66900	10·0	...	...	...	Clear
·006	4·40	4·405	43720	10·3	...	...	...	Suspended particles
1·000	6·60	7·423	73910	14·8	...	...	...	Clear, a little suspended matter
·120	11·66	11·759	117270	29·2	...	...	...	Turbid, suspended matters
1·250	7·70	8·729	86970	33·0	...	...	...	Clear
·030	5·50	5·525	54930	18·0	...	...	...	Clear, suspended particles
·006	2·86	2·865	28330	5·8	...	...	...	Clear, a little suspended matter
·003	trace	0·0	0	2·2	...	...	...	Suspended matters
·010	4·40	4·408	43760	12·0	...	...	...	Clear
·012	trace	0·0	0	4·8	...	...	...	Sediment
·008	1·10	1·106	10740	6·0	...	...	...	Suspended matters
·001	3·30	3·300	32690	16·0	...	...	...	Clear
·010	1·10	1·108	10760	6·0	...	...	...	Sediment
·003	5·72	5·722	56900	14·5	...	...	...	Rather turbid
·001	4·40	4·401	43680	6·0	...	...	...	Clear
·004	5·28	5·283	52510	10·0	...	...	...	Suspended matters
·250	3·30	3·506	34740	7·2	...	...	...	Clear
·001	2·20	2·201	21690	14·3	...	...	...	Clear
·002	6·16	6·162	61300	8·3	...	...	...	Clear
·002	3·30	3·302	32700	9·6	...	...	...	Clear
·002	·44	·442	4100	7·5	...	...	...	Clear
·003	4·84	4·842	48100	11·2	...	...	...
5·000	1·98	6·098	60660	58·0	...	...	...	Rather turbid

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued.)				
Nov. 10th	340—341, Icknield Port Road ...	...	92·0	...	moderate
" 15th	12 Court, Farm Street (Fever) ...	...	44·0	...	...
" 16th	2 Court, Coventry Road ...	...	140·0	...	...
" "	122, Gough Road ...	...	40·0	...	large
" 17th	The Workhouse ...	...	14·0	...	small
" "	Ashbourne Place, St. Mark Street ...	...	30·0	...	moderate
" "	76, Bristol Road ...	...	96·0	...	rather large
" 18th	11 Court, Bartholomew Street ...	...	224·0	...	...
" "	8 Court, Wrentham Street ...	...	192·0	...	very large
" "	Beech Terrace, Grange Road (Scarlet Fever) ...	...	170·0	...	...
" "	3 Court, Manchester Street ...	...	226·0	...	...
" 20th	28 and 29, Muntz Street (Diphtheria) ...	...	166·0	...	...
" 21st	90, Icknield Square ...	...	170·0	...	large
" 28th	121, Belgrave Road ...	...	196·0	...	...
" "	2 Court, Kent St. North (Scarlet Fvr.) ...	...	86·0	...	rather large
" 30th	145, Sampson Road (Scarlet Fever) ...	...	104·0	...	very large
" "	8½, Ruston Street ...	...	138·0	...	...
Dec. 2nd	23, Fazeley Street ...	...	564·0	...	...
" 5th	7, Green Street (Scarlet Fever) ...	...	116·4	...	...
" "	Park Villas, Moilliett Street ...	...	14·8	...	...
" "	35 Court, Great Russell Street ...	...	93·6	...	moderate
" "	30 High Street, Deritend (Scarlet Fvr.) ...	...	252·2	...	"
" 6th	Malvern Villas, Handsworth New Rd. ...	...	78·4	...	large
" 8th	23 Court, Moor Street ...	...	242·4	...	...
" "	6 Court, Essex Street ...	...	203·4	...	...
" "	71, Smallbrook Street ...	...	341·6	...	...
" "	Russell Terrace, Kent St. North (Typhoid) ...	...	195·2	...	very large
" "	Myrtle Place, Priestley Road ...	...	85·2	...	large
" 9th	11 Court, Edgbaston Street ...	...	137·8	...	very large
" "	1 Court, Camp Hill, (Scarlet Fever) ...	...	169·6	...	small
" "	50, Francis Street ...	...	232·4	...	...
" "	27, Hockley Hill ...	...	136·0	...	very large
" "	54 and 55, Bristol Street ...	...	179·2	...	...
" "	18—20, Belgrave Road ...	...	178·4	...	rather large
" "	22 Court, Benaere Street (Small-pox) ...	...	42·0	...	moderate
" "	Brighton Place, Greenway St. (Scarlet Fever) ...	...	327·8	...	"
" 12th	23, Latimer Street ...	...	157·6	...	small
" "	41, Allcock Street ...	...	158·8	...	moderate
" "	42—46, Allcock Street ...	...	102·2	...	small
" "	37, Park Road ...	...	275·8	...	...
" "	9 Court, Vaughton Street (Typhoid) ...	...	83·4	...	moderate
" "	43, Beach Street ...	...	139·2	...	small
" "	66, Cooksey Road (Scarlet Fever) ...	...	86·8	...	...
" "	113, Hockley Hill ...	...	76·8	...	...
" 15th	14, Gooch Street ...	...	166·2	...	small
" "	64—70, Allcock Street ...	...	257·6	...	...
" "	41, Park Road ...	...	83·6	...	...
" 16th	76 and 77, Varna Road ...	...	137·6	...	very large
" 18th	Spring Hill Cottages, Spring Hill Passage ...	...	156·6	...	rather large
" 28th	30—31, Icknield Port Road ...	...	129·4	...	small
" "	318—321, Icknield Street West ...	...	180·0	...	moderate
" 29th	196, Cromwell Street (Typhoid) ...	...	361·8	...	...

(continued.)

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination Estimated	Chlorine.	Hardness.			REMARKS
					Tempor- ary	Perman- ent	Total	
·003	3·96	3·962	39300	9·0	...	...	...	Clear
·040	2·20	2·330	22010	7·5	...	...	...	Turbid
·125	4·95	5·053	50210	12·3	...	...	...	Clear
·015	1·32	1·332	13000	3·3	...	...	...	Clear, floating particles
·025	trace	0·0	0	1·1	...	...	...	Not quite clear, contained many small particles
·005	·77	·774	7420	1·6	...	...	...	Clear, a few suspended particles
·010	1·10	1·108	10760	8·8	...	...	...	Suspended particles
1·250	8·03	9·060	90280	35·2	...	...	...	Clear
·010	3·41	3·418	33860	14·5	...	...	...	Suspended particles
·480	7·70	8·095	80630	17·2	...	...	...	Clear
·450	5·50	5·871	58390	32·3	...	...	...	Ditto
·250	3·30	3·506	34740	14·0	...	...	...	Ditto
·012	5·50	5·510	54780	21·1	...	...	...	Ditto
·028	2·64	2·660	26311	7·0	...	...	...	Ditto
·010	3·08	3·088	30562	7·3	...	...	...	A few suspended particles
·006	2·75	2·755	27230	5·2	...	...	...	Clear
·050	8·03	8·070	80390	17·0	...	...	...
2·500	12·10	14·159	141270	82·5	...	...	...	Clear, contains copper
4·500	5·50	9·200	91680	11·3	..	...	..	Clear
·025	trace	0·0	0	2·5	...	...	...	Turbid
·010	·55	·557	5200	11·3	...	...	...	Clear
·008	6·38	6·386	63500	36·0	..	...	...	Ditto
·012	·44	·450	4180	2·2	...	...	...	Ditto
·045	11·00	11·035	110000	25·8	...	...	...	Ditto
·100	9·24	9·24	92900	20·1	...	...	...	Ditto
·300	9·90	9·90	98900	80·5	...	...	...	Ditto
·018	10·12	10·260	102280	16·0	...	...	...	Rather turbid
·014	3·96	3·971	39400	2·8	...	...	...	Rather turbid
·016	6·60	6·613	65810	15·5	...	...	...	Clear
·003	4·40	4·402	43700	13·7	..	...	...	Ditto
·040	8·80	8·833	88010	17·8	...	...	...	Turbid, large black deposit
·024	6·60	6·620	65880	16·0	...	...	...	Clear
1·100	8·80	9·705	96700	15·8	...	...	...	Ditto
·005	1·10	1·104	10720	20·0	...	...	...	Ditto
·002	7·70	7·701	76700	24·4	...	...	...	Suspended matters
·005	1·10	1·104	10720	11·3	...	...	...
·004	2·42	2·423	23900	30·0	...	...	...	Turbid, many suspended particles
·005	3·52	3·524	34910	15·0	...	...	...	Clear
·002	1·51	1·541	15100	10·1	...	...	...	Clear
1·200	15·42	16·408	163660	35·2	...	...	...	Clear
·004	4·40	4·403	43700	13·7	...	...	...	Ditto, a few suspended particles
·003	3·48	3·082	30500	6·8	...	...	...	Clear
·040	·88	·913	8810	3·5	...	...	...
·090	·77	·844	8120	14·1	...	...	...	Clear, suspended particles
·006	7·04	7·045	70130	19·8	...	...	...	Ditto
...	11·00	—	—	28·4	...	...	...	Clear, brown residuc
·029	5·72	5·744	57120	10·0	...	...	...	Clear
·003	3·08	3·082	30400	7·3	...	...	...
·010	8·80	8·808	87600	9·1	...	...	...	Clear, suspended particles
·006	6·27	6·740	62430	11·8	...	...	...	Clear
·006	10·45	10·460	104310	16·9	...	...	...	Clear
·100	7·92	8·000	79700	19·1	...	...	...

Table of the Number of Deaths occurring in each Street in the Borough of
Birmingham during the Year, 1876.

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
A			Bird Lane	1	2	Chapel Street		3
Abberley Street	1	5	Bishopgate Street	2	28	Chapman Road		1
Abbey Street	1	2	Bishop St., St. Martin's ..	2	14	Charles Arthur Street ..	2	4
Aberdeen Street	2	15	Bishop Street, St. Mary's ..		8	Charles Henry Street ..	9	27
A. B. Row			Bishop Street South	1	2	Charlotte Road		2
Adam Street	3	10	Bissell Street	8	14	Charlotte Street		7
Adderley Street	2	15	Blake Lane			Chatlaway Street		1
Adelaide Street, Deritend ..	1	6	Blews Street	1	10	Cheapside	8	56
Adelaide St., Duddleston ..		3	Blews Street West	3	2	Cheatham Street		3
Albert Street, Deritend ..	2	3	Bloomsbury	1	21	Chequer's Walk		2
Albert Street, All Saints' ..	2	4	Bloomsbury Street	3	14	Cherry Street		1
Albert Street, St. Peter's ..			Blucher Street	2	10	Cherry Wood Lane		
Albion Street		2	Bolton Road	5	3	Chester St., Ladywood ..	4	12
Alcester Street	6	18	Bond Street	1		Chester St., Duddleston ..		2
Alexandra Road			Bordesley Green		10	Cheston Road		
Alexandra Street	1	1	Bordesley Green Road			Christ Church Passage ..		
Alfred Street			Bordesley Park Road	2	20	Church Road, Duddleston ..		
Allcock Street	4	11	Bordesley Street	8	34	Church Road, Edgbaston ..		4
Allesley Street		2	Bow Street	1	8	Church Road, All Saints' ..		3
Allison Street	2	19	Bowyer Street		1	Church Street		2
All Saints' Street		2	Bracebridge Street	3	5	Clarendon Road	2	3
Alma Crescent	1	5	Bradford Street	10	18	Clark Street	8	9
Alma Street			Braithwaite Road		4	Claverdon Street		6
Alston Street	1	3	Branston Street	2	9	Claybrook Street	1	3
Ampton Road		3	Brasshouse Passage		3	Clement Street	1	3
Anderton Road		3	Brass Street		4	Clove Terrace		
Anderton Street	2	3	Bread Lane			Clissold Street		3
Andover Street		1	Bread Street, St. Paul's ..	4	17	Cliveland Street	2	2
Angelina Street	4	16	Bread Street, St. Martin's ..	1	5	Coach Yard		1
Ann Street			Brearley Street	3	13	Coleman Street	2	17
Argyle Street	1	4	Brearley Street West		14	Coleshill Street	3	21
Armoury Road			Brewery St., Deritend ..			College Street		5
Arsenal Street	1		Brewery St., St. Mary's ..	1	4	Colmore Row		
Arthur Road			Brewery St., Duddleston ..	1	12	Commercial Street		
Arthur Street	2	13	Brickla Street	1	5	Conamunition Row	1	5
Ashled Row	7	13	Bridge Road			Congreve Street		3
Aston Brook Street			Bridge street, Duddleston ..			Constitution Hill	1	10
Aston Road	8	32	Bridge Street, St. Thomas's ..			Conybere Street	2	11
Aston Street		5	Bridge Street West	9	39	Cooksey Road		3
Asylum Road	1	6	Bristol Road	3	10	Cope Street	1	4
Augusta Street		3	Bristol Street	1	14	Coplow Street	1	2
Augustus Road		2	Broad Street	4	15	Cotton Row		1
Austin Street		1	Bromsgrove Street	4	37	Cotton Street		1
Avenue Road	1	5	Brookfield Road			Coventry Road	13	36
B			Brook Road			Coventry Street	4	11
Bacchus Road	2	6	Brook Street		2	Cox Street	1	3
Bagot Street	6	10	Broom Street		1	Coxwell Road		4
Bailey Street		2	Brunton's Walk			Crabtree Road	2	2
Baker Street	1	2	Buckingham Street	2	8	Cranmore Street		3
Balloon Street	1	2	Buck Street	2	3	Cregoe Street	2	21
Balsall Heath Road		3	Bullock Road		1	Crescent		4
Balsall Street		3	Bullock Street		3	Crescent Wharf		
Banbury Street		7	Bull Ring		3	Cromwell Street	9	34
Barford Street	4	18	Bull Street	2	3	Crooked Lane		
Barford Street South	3	13	Burbury Street	1	8	Cross Street	1	5
Barker Street	1	5	Butler Street			Cuckoo Road	2	3
Barlow's Road			C			Cumberland Street		2
Barn Street	4	10	Calthorpe Road		5	Curzon Street	2	10
Barrack Street		2	Cambridge Crescent		2	Cuthbert Road		1
Barr Street	4	21	Cambridge Street	2	2	D		
Barr Street West	1	9	Camden Drive			Dale End	2	11
Bartholomew Row	2	5	Camden Grove			Dark Lane		1
Bartholomew Street	3	9	Camden Street	7	30	Dartmouth Street	7	22
Baskerville Passage			Camp Hill		10	Darwin Street	10	39
Baskerville Place		1	Camp Street	1	6	Dawson Street	1	
Bath Passage			Canal Street	1	2	Dean Street	1	5
Bath Row	2	10	Cannon Street	1	1	Derby Street	1	3
Bath Street		7	Cape Lane			Devon Street	10	16
Beak Street	7	9	Cape Street	1		Devonshire Street		
Bear Lane		4	Cardigan Street	1	17	Digbeth	2	19
Beatrice Crescent			Carlisle Street		3	Digby Street	1	1
Beaufort Road	1	2	Caroline Street	3	4	Doe Street		5
Bedford Road	1	4	Carpenter Road		1	Dohman Street		8
Belgrave Road		6	Carr's Lane			Drury Lane		1
Bell Barn Road	7	30	Cartland Road		2	Duchess Road		1
Bellis Street		5	Carver Street	3	11	Duddleston Mill Road ..	1	7
Bell Street			Castle Street, St. Peter's ..		2	Duddleston Row	4	6
Belmont Passage		3	Castle Street, Deritend ..			Dudley Road	4	15
Belmont Row		9	Cathcart Street		9	Dudley Street		2
Benaere Street	6	21	Cato Street		10	Dugdale Street	1	6
Bennett's Hill	1	1	Cato Street North	3	10	Duke Street	4	12
Berkeley Street		1	Cattell Road	7	16	Dymoke Street	4	17
Berner's Street	2	8	Cattell Grove	1	2	E		
Beswick Street			Cecil Street	2	19	Eastern Road		
Betholam Row	2	2	Centre Row			Easy Row	1	3
Birchall Street		3	Chad Road		1	Eden Place		
			Chapel House Street	1	2	Edgbaston Road		

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Edgbaston Street ..	2	6	Green Lane ..	2		J		
Edmund Street ..		1	Greenfield Crescent ..					
Edward Road ..			Green Street, Deritend ..	1	4		Jamaica Row ..	1
Edward Street ..		8	Green Street, All Saints' ..	3	1		James Street ..	3
Elkington Street ..			Green's Village ..		4		Jenkin's Street ..	1
Ellen Street ..		9	Greenway Street ..	11	19		Jennen's Row ..	1
Ellis Street ..	1	9	Grindstone Road ..				Johnson Street ..	6
Elvetham Road ..		1	Grosvenor Row ..	1	2		Johnstone Street ..	3
Emily Street ..	4	12	Grosvenor Street ..	1			John Street ..	15
Emmeline Street ..			Grosvenor Street West ..	3	16		K	
Enfield Road ..			Guest Street ..		4			
Engine Street ..		2	Guildford Street ..		9	Keeley Street ..		
Erasmus Road ..		5	Gullet, St. Mary's ..		1	Kelynge Street ..		8
Ernest Street ..			Gullet, Deritend ..			Kendall Street ..		
Essex Street ..	2	8	Gullet, St. Thomas's ..			Kent Street ..		1
Essington Street ..	3	6	H			Kent Street North ..		1
Exeter Row ..		11				Kenyon Street ..		1
Eyre Street ..		4				Key Hill ..		7
F						King Alfred's Place ..		4
						King Edward's Place ..	4	
						King Edward's Road ..	1	
						Kingston Road ..	2	
						King Street ..	1	
						Kyrwick's Lane ..	2	
					L			
Factory Road ..		1	Hagley Road ..	1		14	Ladypool Lane ..	2
Falconer Road ..			Hall Hill Road ..			1	Ladywell Passage ..	
Farm Road ..			Hall Street ..	2		5	Ladywell Walk ..	
Farm Street ..	18	43	Hampton Street ..	5		22	Ladywood Road ..	4
Fawdry Street ..			Hampton Row ..			1	Ladywood Grove ..	26
Fazeley Street ..	1	10	Handsworth New Road ..	1			Laneaster Street ..	4
Fisher Street ..	1	9	Hanley Street ..			12	Lander Street ..	25
Fleet Street ..	3	13	Harborne Road ..		5	Langley Road ..		
Floodgate Street ..	2	20	Harding St., St. George's ..	2	8	Lansdown Street ..	1	
Florence Street ..	2	6	Harding Street, All Saints' ..	1		Larches Street ..	3	
Fordrough Lane ..			Harford Street ..	1	1	Latimer Street ..	4	
Fordrough Street ..	5	11	Harrison's Road ..			Latimer Street South ..	2	
Ford Street ..	4	14	Hatchett Street ..	10	17	Lawden Road ..	1	
Forge Street ..			Hawkes Street ..		11	Lawley Street ..	5	
Foundry Road ..			Heath Mill Lane ..	5	10	Lawrence Street ..	1	
Fowler Street ..			Heath Street ..	11	32	Lease Lane ..	1	
Fox Street ..	2	7	Heath Street South ..		2	Ledsam Street ..	7	
Francis Road ..		6	Heaton Street ..	5	9	Lee Bank Road ..	2	
Francis Street ..	9	19	Helena Street ..	1		Lee Crescent ..	5	
Frankfort Street ..		9	Heneage Street ..	3	36	Lee Mount ..	1	
Franklin Street ..	1		Henley Street ..		6	Leek Street ..	5	
Frank Street ..		3	Henn Street ..		1	Lees Street ..		
Frederick Road ..		1	Henn's Walk ..		4	Legge Lane ..	2	
Frederick Street ..		6	Henrietta Street ..		4	Legge Street ..	1	
Freeman Road ..	2	6	Henry Street ..	6	17	Lench Street ..	2	
Freeman Street ..	1	2	Herbert Road ..	5	17	Lennox Street ..	7	
Freeth Street ..	4	8	Hermitage Road ..		1	Leopold Street ..	3	
Friston Street ..		13	Hickman Road ..			Lichfield Street ..	1	
G			Hick Square ..			Lilly Green ..	1	
			Hick Street ..	3	11	Lingard Street ..	1	
			Highfield Road ..			Lionel Street ..	2	
			Highgate Lane ..	1	11	Lister Street ..	2	
			Highgate Place ..			Little Ann Street ..	1	
			Highgate Street ..		16	Little Barr Street ..	8	
			High Park Street ..	1	6	Little Bow Street ..	1	
			High Street ..	1	5	Little Broom Street ..		
			High Street, Deritend ..	15	25	Little Cannon Street ..	2	
			Hill Street ..	2	12	Little Charles Street ..		
Galton Street ..			Hingeston Street ..	13	22	Little Cherry Street ..	1	
Garbett Street ..	1	14	Hob Moor Lane ..			Little Elward Street ..	1	
Garrison Lane ..	1	25	Hockley Hill ..	1	14	Little Francis Street ..	1	
Garrison Street ..	3	17	Hockley Pool Road ..			Little Green Lane ..	18	
Gas Street ..		4	Hockley Street ..		3	Little Hill Street ..		
Geach Street ..		6	Holborn Hill ..	2	6	Little King Street ..	1	
Gee Street ..	2	6	Holland Street ..		7	Little Shadwell Street ..		
Gem Street ..		6	Holliday Street ..	4	19	Liverpool Street ..	1	
George Road ..	1	2	Hollier Street ..	2	6	Livery Street ..	19	
George Street ..		17	Holloway Head ..	1	12	Lloyd Street ..		
George Street, Nechells ..		3	Holly Road ..			Lodge Road ..	4	
George Street West ..	5	16	Holt Street ..	3	11	Lombard Street ..	2	
Gibb Street ..			Hooper Street ..		5	London Prentice Street ..	3	
Gladstone Road ..	1	3	Hope St. (St. Martin's) ..	9	33	Love Acre ..	2	
Glebe Passage ..			Hope Street (All Saints) ..			Longmore Street ..	6	
Glebe Street ..	6	7	Horse Fair ..	1	4	Long Street ..	2	
Gloucester Street ..		1	Hospital Street ..	3	31	Lord Street ..	7	
Glover's Road ..		3	Howard Place ..	3	15	Lonisa Street ..	2	
Glover's Street ..	2	14	Howard Street ..	2	4	Loveday Street ..	1	
Godwin Street ..	5	4	Howe Street ..	3	13	Love Lane ..	5	
Golden Hillock Road ..		3	Hubert Street ..		1	Lower Camden Street ..	7	
Gooch Street ..	11	27	Hunter's Lane ..			Lower Dartmouth Street ..	5	
Goode Street ..	2	6	Hunter's Vale ..			Lower Darwin Street ..	2	
Goodrick Street ..	1	1	Hurst Street ..	4	14	Lower Devon Street ..		
Gopsall Street ..	1	1	Hutton Street ..			Lower Essex Street ..	3	
Gosta Green ..	1	3	Hyde Road ..	1	6	Lower Fazeley Street ..	5	
Gough Road ..	1	9	Hylton Street ..		3	Lower Henry Street ..		
Gough Street ..	2	6	I			Lower Hospital Street ..	1	
Graham Street ..		2					Lower Hurst Street ..	4
Grange Road ..	3	5						
Grantham Road ..								
Grant Street ..	3	7						
Granville Street ..	5	10						
Great Barr Street ..	4	18						
Great Brook Street ..	2	17						
Great Charles Street ..	2	9						
Great Colmore Street ..	5	24						
Great Francis Street ..	6	18	Icknield Port Road ..	10	26			
Great Hampton Row ..	6	19	Icknield Square ..	2	14			
Great Hampton Street ..	4	9	Icknield Street East ..	4	28			
Great King Street ..		15	Icknield Street West ..	4	16			
Great Lister Street ..	7	30	Inge Street ..	6	15			
Great Queen Street ..			Ingleby Street ..		10			
Great Russell Street ..	10	36	Inkerman Street ..	5	9			
Great Tindal Street ..		5	Irving Street ..	4	33			
			Islington ..					
			Islington Row ..	3	6			
			Ivy Lane ..		2			

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Lower Hurst Street East	2	1	New John Street	7	10	R		
Lower King Edward's Rd.	3	4	New John Street West	14	57	Radnor Street		4
Lower Lawley Street		1	New Market Street		2	Railway Terrace, Ddston		6
Lower Loveday Street	1	1	New Meeting Street		1	Railway Terrace, Neechells	2	13
Lower Pershore Street		2	New Spring Street	1	10	Rann Street		1
Lower Prescott Street		1	New Street		4	Ratcliffe Place		
Lower Priory		1	New Summer Street	2	21	Ratcliffe Street		
Lower Russell Street		1	Newton Street		3	Ravenhurst Street	2	7
Lower Street		3	Newtown Row	4	31	Rawlins Street	2	6
Lower Temple Street			Nile Street			Rea Street	2	12
Lower Tower Street	3	20	Nineveh Road			Rea Street South	1	9
Lower Trinity Street	2	2	Noel Road			Regent's Parade		1
Lower Windsor Street	1	12	Norfolk Road			Regent Park Road		1
Loxton Street		4	Norfolk Street	1	3	Regent Place		1
Ludgate Hill		5	Norman Street		5	Regent Row		1
Ludgate Hill Passage			Northampton Street		3	Regent Street		
Lupin Street	4	12	Northbrook Street		2	Reservoir Retreat		
M			Northumberland Street		3	Reservoir Road	2	4
Macdonald St., St. Geo.	3	7	North Warwick Street			Reservoir Street	3	15
Macdonald St., St. Mrtn's	1	6	Northwood Street	3	13	Richmond Hill Road		
Main street		7	North Street			River Street	1	3
Malvern Hill Road		2	Norton Street		2	Robert Road		
Manchester Street			Nova Scotia Street	1	6	Rocky Lane	2	10
Manor Road		1	Nursery Road			Rodway Street		1
Market Street	1	3	O			Rope Walk		
Mark Lane	1	4	Oakley Road	1	1	Rotton Park Road	1	
Marroway Street			Old Cross Street	2	11	Rotton Park Street		
Marshall Street	1	4	Old Inkleys	1	6	Rowland Street		2
Marshall Street South	2	2	Old Meeting Street	1		Rupert Street	3	15
Mary Ann Street		5	Old Square			Russell Street		4
Mary Street			Oliver Road		3	Ruston Street		9
Masshouse Lane (St. Pirs)	1		Oliver Street		10	Ruston Street North	8	14
Masshouse Lane, Edgbstn	1		Oozells Street		2	Ryland Road	4	10
Meeting House Yard		2	Oozells Street North		2	Ryland Street, Deritend		5
Meriden Street	5	11	Ormond Street	2	10	Ryland St., Ladywood	1	9
Metehley Lane		3	Osler Street	11	22	Ryland Street North	1	9
Metehley Park Road			Oughton Place		3	S		
Miles Street	3	9	Outlet Road			Salop Street	1	3
Milk Street	1	17	Owen Street	1	11	Saltley Road	1	15
Miller Street	2	4	Oxford Street	1	5	Saltley Street		5
Mill Lane		2	Oxygen Street		2	Sampson Road		2
Mill Street, Duddeston	1	2	P			Sand Pits	1	9
Mill Street, Ladywood	2	4	Paddington Street	1	8	Sand Street		
Milton Street	2	2	Pakenham Road		1	Sandon Road		
Milward Street	6	5	Palmer Street	1	14	Sandy Lane	3	7
Minories			Parade		6	Sarah Street		
Moat Lane		2	Paradise Street		6	St. Andrew's Street	3	7
Moat Row			Parker Street	1	10	St. Clement's Road	1	
Mollitt Street	2		Park Lane		4	St. George's Crescent		
Moland Street	7	14	Park Road, All Saints'	2	21	St. George's Street	5	18
Mole Street		5	Park Road, Edgbaston			St. George's Place		3
Monmouth Street			Park Street	3	14	St. George's Terrace		
Montagne Road			Parliament Street		3	St. James' Place	1	3
Montagne Street	3	2	Pebble Mill Road			St. James' Road		
Montgomery Street			Peel Street	2	3	St. James' Street		
Montpellier Street		3	Penn Street, Deritend		3	St. Luke's Road		7
Moument Lane		9	Penn Street, Duddeston		6	St. Luke's Street	2	10
Moore's Row			Pershore Road	3	13	St. Mark's Street		2
Moorson Street	2	1	Pershore Street	2	6	St. Mark's Street West	1	6
Moor Street	1	8	Phillip's St., St. Peter's			St. Martin's Lane		
Morcton Street	1	4	Phillip's St., St. George's	2	5	St. Martin's Place		1
Morville Street	5	9	Pickford Street	2	6	St. Martin's Row		
Moseley Road	5	24	Piddock Street		3	St. Martin's Street	2	7
Moseley Street	5	36	Pigott Street	1	4	St. Mary's Row		
Mott Street		10	Pinfold Street			St. Mary's Street	1	3
Mountfield Road			Pitney Street			St. Paul's Square		2
Mount Pleasant			Pitsford Street			St. Peter's Place		
Mount Street, St. Paul's			Plough and Harrow Road			St. Philip's Church Yard		
Mount Street, Deritend	1	1	Pope Street	5	17	St. Stephen's Street		
Mount St., Winson Green		5	Poplar Avenue East			St. Vincent's Street		19
Mount Street, Neechells		9	Poplar Avenue West			Scholefield Street	3	12
Musgrave Road	3	2	Porchester Street	2		Scholefield Passage		
Muntz Street	1	6	Portland Road			Scotland Street		1
N			Potter Street	1	5	Scott Street		
Navigation Street	1	13	Poultry			Severn Street		6
Neechells Park Road	2	17	Powell Street	1	1	Seymour Street		
Neechells Place		14	Prescott Street	1	7	Shadwell Street	2	8
Needham Street			Priestly Road	1	9	Shakespeare Road	2	12
Needless Alley			Primrose Hill	1	4	Sheepcote Lane		5
Nelson Street	1	5	Princes Row		2	Sheepcote Street	1	12
Nelson Street South	1	25	Princes Street			Sherborne Street	4	9
Nelson Street West	3	11	Princess Road	1	1	Sherlock Street	5	22
New Bartholomew Street		1	Princip Street			Shutt Lane		3
New Bond Street			Priory Road		1	Silver Street		1
New Bridge Street	3	3	Pritchett's Lane			Sir Harry's Road		
New Canal Street	1	8	Pritchett Street	3	14	Skinner Lane	1	6
New Church Street	1	2	Proctor Street		8	Skinner Street		1
Newdegate Street	1	4	Prospect Row		5	Slaney Street	3	3
New Edmund Street			Q			Sloe Lane		1
New England			Queen Street			Smallbrook Street	2	5
New Hall Hill		2				Smithfield Passage	1	
New Hall Street		1				Smithfield Street		1
New Inkleys		1						

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Smith St., St. George's ..	2	15	U			Wheley's Road ..		7
Smith Street, Duddeston ..	2	6	Unett Street ..	4	21	White Lion Passage ..		
Snake Street ..	1	5	Union Passage ..		2	White Road ..	1	2
Snow Hill ..	3	14	Union Street ..		1	Whitmore Road ..	1	4
Soho Road ..		5	Union Terrace ..			Whitmore Street ..	3	3
Somerset Road ..		1	Upper Dean Street ..		1	Whittall Street ..		5
Somerset Street ..	1	3	Upper Gough Street ..	1	3	Wiggin Street ..		2
South Road ..	3	6	Upper Highgate Street ..		6	William Edward Street ..	4	2
Spark Street ..		2	Upper Hockley Street ..		2	William Henry Street ..	2	2
Speaking Stile Walk ..	1	3	Upper Hospital Street ..	4	9	William St., St. Thomas' ..	2	22
Speedwell Road ..		1	Upper Marshall Street ..		2	William Street, Deritend ..		
Spencer Street ..		9	Upper Mill Lane ..			William Street North ..	1	6
Spiceal Street ..		2	Upper Priory ..		6	Willis Street ..	1	9
Spon Terrace ..			Upper Prescott Street ..			Wilton Street ..		8
Spooner Street ..		5	Upper Ryland Road ..	4	7	Windmill Street ..		1
Springfield Street West ..	6	10	Upper Tower Street ..		1	Windsor Street ..		2
Spring Hill ..	3	9	Upper Trinity Street ..	5	7	Winson Green Road ..	1	8
Spring Hill Passage ..			Upper Windsor Street ..	1	17	Winson Street ..	1	5
Spring Street ..		4	V			Witton Street ..	1	8
Spring Vale ..		1	Vale Street ..		5	Woodecock Street ..	1	12
Stafford Street ..	1	10	Varna Road ..	1	7	Wood Street, St. Thomas' ..		3
Staniforth Street ..	5	25	Vaughton Street ..	5	13	Wood Street, Ladywood ..		
Steelhouse Lane ..	1	22	Vaughton Street South ..		5	Worcester Street ..		
Stephenson Place ..		1	Vauxhall Grove ..		1	Worcester Wharf ..		7
Steward Street ..		7	Vauxhall Road ..	2	21	Wordsworth Road ..		
Stewart Street ..		1	Vauxhall Street ..		1	Wrentham Street ..	2	17
Stoke Street ..	1	8	Vere Street ..	1	13	Wright Street ..		1
Stone Yard ..	1	2	Vicarage Road ..			Wrottesley Street ..		2
Stoney Lane ..	1		Victoria Grove ..	1	6	Wyndham Road ..		
Stour Street ..	3	12	Victoria Street ..	1	2	Wynn Street ..		13
Stratford Place ..			Villa Street ..	1	7	X		
Stratford Road ..		11	Villiers Street ..		1	Y		
Stratford Street ..		7	Vine Street ..		1	Yew Tree Road ..		
Suffolk Street ..	1	21	Vittoria Street ..	1	1	York Passage ..		1
Summer Hill ..		6	Vyse Street ..		1	York Road ..	1	1
Summer Hill Street ..	3	9	W			York Street ..		2
Summer Hill Terrace ..			Walter Street ..			Z		
Summer Lane ..	6	46	Ward Street ..	2	10	ADDENDA.		
Summer Road ..			Warner Street ..		4	Birmingham and Fazeley		
Summer Row ..		3	Warstone Lane ..	3	9	Canal ..		2
Summer St., Edgbaston ..	2	4	Warstone Parade East ..		1	Birmingham & Warwick		
Summer St., St. Martin's ..	2	1	Warstone Parade West ..			Canal ..		3
Sun Street ..	2	5	Warwick House Passage ..			Birmingham & Worcester		
Sun Street West ..		6	Warwick Street ..	3	8	Canal ..		2
Sutton Street ..		1	Washington Street ..		4	Camp Hill Station ..		1
Swallow Street ..		9	Waterloo Street ..		2	Great Western Railway ..		1
Swan Passage ..			Water Street ..	1	9	L. & N. W. Railway ..		1
T			Waterworks Road ..	7	22	New Street Station ..		2
Talbot Street ..	3	10	Watery Lane ..		1	Old Birmingham Canal ..		10
Talfourd Street ..	2	6	Weaman Row ..		1	Pebble Mill Pool ..		1
Tanter Street ..	3	9	Weaman Street ..	2	15	Snow Hill Station ..		1
Taylor Street ..	1	2	Wellesley Street ..		2	AT INSTITUTIONS.		
Temple Field Street ..		3	Wellington Passage ..			General Hospital ..	3	183
Temple Row ..		1	Wellington Road ..		3	Queen's Hospital ..	13	153
Temple Row West ..			Wellington St. L'dywood ..	1	5	Children's Hospital ..	9	21
Temple Street ..			Well Lane ..		1	Workhouse (4) ..	21	416
Tenby Street ..		3	Well Street ..	3	21	Asylum ..	1	66
Tenby Street North ..		5	Westbourne Road ..		1	Gaol ..		4
Tennant Street ..	2	16	Western Road ..			Women's Hospital, Crescent ..		1
Theodore Street ..	1	13	Westfield Road ..		2	Homoeopathic Hospital ..		1
Thimble Mill Lane ..		7	Westley Street ..	2	10	Eye Hospital ..		1
Thomas St., St. Mary's ..	3	21	Weston Street ..		3	Borough Hospital ..	4	
Thomas Street, Deritend ..	2	4	Wharf Lane ..		4	TOTALS ..	1336	6994
Thorp Street ..	3	2	Wharf St., St. Thomas' ..	4	21			
Tillingham Street ..		1	Wharf Street, Deritend ..	1	1			
Tindal Street ..	1	8	Wharf Street, Duddeston ..					
Tonk Street ..	2	5	Wharf Street, All Saints' ..					
Tower Street ..	4	29	Wharton Street ..		1			
Trafalgar Road ..			Wheeler Street ..	4	19			
Trent Street ..		10	Wheley's Lane ..		1			
Trinity Terrace ..								
Turner Street ..	1	1						
Tyndall Street ..		9						

Grand Total ... 8,330

NOTE.—The number in a bracket refers to cases of Searlatina which, having occurred in the Institution to which the numeral is appended, have been subsequently removed to the Borough Infirmary and there ended fatally. This number is therefore to be added to that opposite to it in the first column.

BOROUGH ANALYST'S LABORATORY,

PUBLIC OFFICE, BIRMINGHAM,

June, 1877.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to report that during the year 1876, I have analysed 92 samples of food and drink, in accordance with the provisions of the "Sale of Food and Drugs Bill." The samples were all submitted to me by the Inspector of Nuisances. The nature of the articles, the results of their analysis and other particulars, are to be found in the subjoined statement.

No.	DATE.—1876.	ARTICLE.	REMARKS.
247—	Feb. 19th...	Coffee	Genuine.
248—	" " ...	Milk of Sulphur	Adulterated with 67 % Sulphate of Lime.
249—	" " ...	Ditto	Genuine.
250—	" " ...	Black Tea	Ditto
251—	" " ...	Oatmeal	Adulterated with about 20 % barley flour.
252—	" " ...	Ditto	Genuine.
253—	" 21st...	Milk	Ditto
254—	" " ...	Ditto	Ditto
255—	" " ...	Ditto	Ditto
256—	" " ...	Milk of Sulphur	Ditto
257—	" " ...	Ditto	Adulterated with 7.58 % Sulphate of Lime, and with flowers of sulphur.
258—	" " ...	Ditto	Genuine.
259—	" " ...	Ditto	Ditto
260—	" " ...	Ditto	Adulterated with 60 % Sulphate of Lime.
261—	" " ...	Ditto	Genuine.
262—	" " ...	Ditto	Ditto
263—	" " ...	Ditto	Ditto
264—	" " ...	Ditto	Ditto
265—	" " ...	Ditto	Ditto
266—	" " ...	Ditto	Ditto
267—	" 23rd...	Milk	Adulterated with 8 % water.
268—	" " ...	Ditto	Ditto
269—	" " ...	Ditto	Genuine.
270—	" 29th...	Ditto	Ditto
271—	Mar. 2nd...	Ditto	Ditto
272—	" 31st...	Oatmeal	Ditto
273—	" " ...	Ditto	Adulterated with 20 % or 30 % barley flour.
274—	" " ...	Ditto	Adulterated with a considerable quantity of barley flour.
275—	" " ...	Ditto	Ditto
276—	" " ...	Ditto	Ditto
277—	" " ...	Ditto	Genuine.
278—	April 9th...	Milk of Sulphur	Ditto
279—	" " ...	Ditto	Ditto
280—	" " ...	Ditto	Ditto
281—	" " ...	Ditto	Ditto
282—	" " ...	Ditto	Adulterated with Sulphate of Lime.
283—	" " ...	Ditto	Ditto
284—	" " ...	Ditto	Ditto

285—April	9th...	Milk of Sulphur	Genuine.
286—	"	" ... Ditto	Ditto
287—	"	" ... Ditto	Adulterated with Sulphate of Lime.
288—	"	" ... Ditto	Ditto
289—	"	" ... Ditto	Ditto
290—	"	19th... Milk	Genuine.
291—	"	" ... Ditto	Ditto
292—	"	25th... Ditto	Ditto
293—	"	" ... Ditto	Ditto
294—	"	" ... Ditto	Ditto
295—	"	" ... Ditto	Ditto
296—	"	" ... Ditto	Ditto
297—	"	" ... Ditto	Ditto
298—	"	" ... Ditto	Ditto
299—	"	27th... Ditto	Ditto
300—	"	" ... Ditto	Ditto
301—	"	" ... Ditto	Ditto
302—	"	" ... Ditto	Ditto
303—	"	" ... Ditto	Ditto
304—April	29th...	Ditto	Ditto
304a—	"	" ... Ditto	Ditto
304b—July	10th...	Ditto	Ditto
305—Aug.	10th...	Ditto	Adulterated with 13 % water, or to 100 parts of milk had been added 15 of water.
306—	"	15th... Ditto	Adulterated with 16·5 % water, or about 18 parts of water had been added to 100 of milk. Fined, 5/- and costs.
307—	"	" . Ditto	Adulterated with 51·4 % water, or about 106 parts of water had been added to 100 of milk. Fined, 20/- and costs.
308—	"	" ... Ditto	Adulterated with 5 % water.
309—Sep.	6th...	Ditto	Contained 13·5 % water, or 14·5 parts of water had been added to 100 of pure milk. Fined 2/6, without costs.
310—	"	" ... Ditto	Contained 12 % water, or 13 parts of water had been added to 100 of milk. Fined 5/- and costs.
311—	"	" ... Ditto	Contained 13 % water, or to 100 parts of pure milk had been added 14 parts of water. Fined, 5/- and costs.
312—	"	" ... Ditto	Genuine.
313—	"	" ... Ditto	Adulterated with 11 % water, or 12 parts of water had been added to 100 of genuine milk, and cream abstracted. Fined 2/6 and costs.
314—	"	" ... Ditto	Genuine.
315—	"	15th... Ditto	Adulterated with about 15 % of water.
316—Oct.	30th...	Mustard	Largely adulterated with flour and turmeric.
317—	"	" ... Coffee	Adulterated with chicory.
318—	"	" ... White Pepper	Genuine.
319—	"	" ... Mustard	Ditto.
320—	"	" ... White Pepper	Ditto.
321—	"	" ... Green Tea	Ditto.
322—Nov.	2nd...	Ditto	Ditto, but slightly faced.
323—	"	" ... Mustard	Genuine.
324—	"	" ... Coffee	Ditto.
325—	"	" ... White Pepper	Ditto.
326—	"	" ... Mustard	Ditto.
327—	"	" .. Black Pepper...	Contains some sand.
328—	"	" ... Coffee	Genuine.
329—	"	" ... Black Tea	Ditto.
330—Dec.	2nd ..	Ale	Adulterated with common salt.
331—	"	4th... Ditto	Of bad quality.
332—	"	12th... Ditto	Adulterated with common salt.
333—	"	11th... Ditto	Of bad quality.
334—	"	12th... Ditto	Ditto.
335—	"	13th... Ditto	Ditto.
336—	"	29th... Milk	Genuine.

The 92 samples consisted of—

	37	Samples of Milk.
	25	" Milk of Sulphur.
	8	" Oatmeal.
	6	" Ale.
	4	" Coffee.
	4	" Mustard.
	4	" Pepper.
	4	" Tea.
<hr/>		
Total	...	92 samples.
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Of the 92 samples analysed, 62 were genuine and 30 adulterated, viz., 11 of milk, 9 of Milk of Sulphur, 5 of oatmeal, 2 of ale, and 1 each of pepper, mustard, and coffee.

Of the 37 samples of milk, 11 had either been adulterated with water or skimmed milk.

The 25 samples of Milk of Sulphur consisted of 16 genuine and 9 adulterated samples. The adulterant used was Sulphate of Lime, except in one case in which it was Flowers of Sulphur.

Five of the eight samples of oatmeal had been adulterated with considerable quantities of barley flour.

Of the six samples of ale analysed, two contained a larger quantity of salt than is allowed by the Excise. One of the samples of coffee submitted I found to contain chicory, while one of the samples of pepper had been adulterated with sand, and one of the samples of mustard with flour and turmeric.

The four samples of tea examined were all genuine, except that one had been faced.

I have the honor to remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

ALFRED HILL, M.D.,

BOROUGH ANALYST.